1924.

City and County of Bristol.

PORT OF BRISTOL.

ANNUAL REPORT

OF THE

Medical Officer of Health

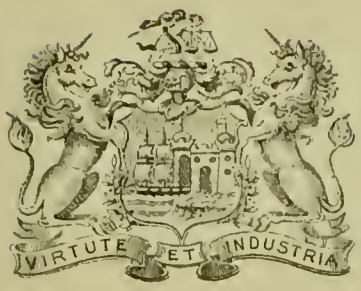
INCLUDING

Report of Port Medical Officers of Health.

Printed by order of the Health Committee.

BRISTOL:
LAVARS AND CO., LTD., PRINTERS, BROAD STREET.

1924.



City and County of Bristol

PORT OF BRISTOL.

ANNUAL REPORT

OF THE

Medical Officer of Health

INCLUDING

Report of Port Medical Officers of Health.

Printed by order of the Health Committee.

BRISTOL:
LAVARS AND CO., LTD., PRINTERS, BROAD STREET.

CONTENTS, 1924.

REPORT OF THE MEDICAL OFFICER OF HEALTH.

CITY OF BRISTOL.

ANNUAL REPORT, 1924.

My Lord Mayor, Ladies and Gentlemen,

In July, 1924, the City Council, wishing to co-ordinate as far as possible the medical work of the City, and recognising its enormous growth both in area and population during the past 40 years,* appointed the School Medical Officer to be Deputy Medical Officer of Health, at the same time strengthening the School Medical Service, and thus completed the consolidation of the medical Health services under one administrative Chief Medical Officer of Health already nominated Administrative Medical Superintendent of the City Hospitals in 1899 and Administrative Tuberculosis Officer in 1917. The Council further signified their wish for unity in the City Medical Health Services by appointing the Medical Officer of Health the "Principal Officer of the Medical Services of the City," which, though not a statutory appointment, sufficiently indicates their intention.

While this appointment includes the Resident Medical Officer at the City Hospital, the Tuberculosis Officer, and the School Medical Officer in the medical staff administratively controlled by the Medical Officer of Health, it in no wise detracts from the dignity or responsibility of their clinical position, and may stand for an example worthy of general adoption.

Possibly no more serious check to the harmonious growth and development of the Public Health Medical Services has arisen than the initiation of new measures of Public Health import in such manner that they might be met by the establishment of independent Officers; thus leading to not infrequent causes for petty jealousy.

But full co-ordination over the whole of England can hardly come to pass until adequate facilities for all preventive work are assured by the economical establishment of a limited number of fully equipped sanitary areas of size adequate to meet the necessary financial responsibilities, in place of the thousand or more petty districts with exiguous means, in which a medical officer of health, however capable, must often be unfairly saddled with a responsibility beyond the possibility of his District to meet. This legacy of legislative error† exists in many parts of the British Isles, but the quaintest example may be found in the picture and description of a "sub-sanitary" officer's home and office in Ireland, contained in Sir Henry Robinson's interesting "Memories." ‡

	Area in Acres.	*Population.*
* 1885	4,500	220,000
1924	18,400	386,200
Increase	13,900	166,200 = population of Southampton.

† "English Sanitary Institutions." Sir John Simon. Chs. xiv and xv.

‡ "Further Memories of Irish Life." Sir Henry A. Robinson; Bart., p. 22. Herbert Jenkins 1924.

The Cripple or Physically Defective Child.

The inclusion of Education interests, hitherto independently administered, in the Health Department, gives opportunity to consider outstanding administrative needs. The question of immediate urgency is the care of the Cripple (physically defective) Child. While power to educate was conferred in 1899, the duty of making provision, institutional or otherwise, for dealing with them was not placed upon Education Authorities until the Act of 1918, which came into operation in April, 1920.

Orthopaedic surgery, stimulated by war experience, now includes not only operative measures, but a revolutionised code for re-education of function, etc., in impaired or paralysed limbs, which has proved of remarkable value.

It has been estimated that between half and one per cent. of the children of school age in England and Wales require treatment and education as cripples. The number of crippled children at school ages in Bristol has been estimated at 495.

During the year 1924 arrangements were made whereby children found by the Maternity and Child Welfare Staff to be suffering from various kinds of eye trouble or crippling diseases, such as Rickets, Infantile Paralysis, etc., are referred to the School Clinics for appropriate treatment. To the end of the year 97 cases of Eye trouble and 43 of Crippling disease were referred in this way.

The benefit to the child concerned is of great value, and mothers are pleased to avail themselves of the facilities for treatment thus afforded.

The Causation of Crippling.

The chief causes of crippling in children may be grouped thus :—

1. Disease of bones or joints, generally *tuberculous* in origin	common age of onset,	1–8 years
2. All forms of paralysis, especially *infantile paralysis*	,, ,, ,,	1–3
3. Heart disease, *Rheumatic Carditis*, Chorea	,, ,, ,,	4–10
4. Certain congenital defects, Talipes, Scoliosis, *Rickets*, and accidents ...	,, ,, ,,	1–2

The London figures for 1922 show that of 898 physically defective children, 160 were crippled by paralysis, 212 by tubercle, 92 by congenital or other deformity, 339 by heart disease, and 95 by other causes.

Schemes for Treatment of Cripple Children.

A scheme to be effective should include (1) early recognition, (2) orthopaedic treatment in hospital, with educational facilities, (3) following up in the homes, and (4) supervision of cases at Out-patient Clinics. Existing schemes are for the most part organised and administered under Voluntary Committees with official representation, Local Authorities participating in the scheme on a contributory basis.

Example.—In Shropshire the scheme is carried on by a

Voluntary Committee and based upon the hospital at Baschurch with some 225 open air beds. Clinics are established for inspection and supervision. The defects treated include deformities congenital or acquired, paralysis, surgical tuberculosis and other defects. In one year, 109 children of school age were treated—33 for surgical tuberculosis, 28 for infantile paralysis, 5 for rickets, 6 for scoliosis, 21 for other deformities, and 16 for various diseases. The population served numbers 246,307. The School M.O. is a member of the General Committee, and the Health Visitors co-operate. The school at the Hospital is recognised for 45 children.

It must be borne in mind that the cure in many cases is necessarily prolonged—thus in various surgical forms of tuberculous disease in the Leasowe Hospital the stay averaged from 227 days to 687, but 74% of the cases were discharged with an arrest of the disease—a highly satisfactory result. In other diseases, the stay may not be more than two or three weeks for a simple tenotomy to six months for a case of infantile paralysis. The length of stay is much lessened by early recognition.

Crippling.

All cases of crippling due to Tuberculosis come within the Sanatorium scheme of the Health Committee, who contemplate developing their Frenchay Park Sanatorium into a complete Orthopædic Hospital which will avoid the present inconvenience of sending cases to distant hospitals. The Council has already authorised provision of this sort. The Health Committee is also interested, under their Child Welfare scheme, in children under school ages suffering from various forms of paralysis. It must not be forgotten, however, that about a third of the cases requiring Institutional treatment and prolonged rest will be found amongst children of school age suffering from Heart Disease, generally the result of Rheumatism. It is of the first importance that these should be well provided for, and they cannot be included in the Tuberculosis scheme. The Board of Education definitely insist that an Orthopædic Hospital should be under open air conditions in a country district, and have recently refused to recognise the City Hospitals for this purpose, so the only way to escape the reproach of having to send Bristol children to a Hospital near Bath is to provide one for Bristol itself.

SMALLPOX AND ALASTRIM.

Although Smallpox, when prevalent in Gloucester in 1896 in virulent form, was introduced into Bristol on more than one occasion, and when prevalent in the adjacent Counties in 1903 was brought in no less than 15 times, it is a curious fact that during the multiple presence of the disease in mild form in Gloucester in 1923 not a single introduction took place. Indeed, with the exception of a ship-borne case from Spain in April 1924, which had no issue, Bristol has remained entirely free from the disease. It is improbable that this immunity from invasion will continue in view of the recorded increase in the

number of infected areas in the midland and more northerly Counties, which show a total for the year 1924 of considerably over 3,000 cases, compared with some 2,500 cases in 1923.

The type of disease appears to be uniformly mild and the mortality negligible, but, even if this type persists, it raises many questions of administration which it may be prudent to consider.

On looking through the records of the 1903–1904 cases in Bristol it is noteworthy that the extreme mildness of a majority of the cases, in striking contrast to the text-book severity of cases met with during the previous twenty years, attracted our attention, and even at that date led us to differentiate between introductions of severe types of disease from the East and of mild forms which had their origin across the Atlantic. There is little doubt that we were dealing with some earlier introductions of the type which Gloucester has made famous, and we learnt, at that time, from the late Dr. Reece, that both types of disease, mild and severe, might co-exist in a town, each strain breeding true to type. The very mildness of the type raised peculiar difficulties in control, but this only added zest to the campaign, and it did prove capable of control in spite of very marked infectivity and the constant recurrence of "missed" cases.

During the introductions of 1903–4, while we marvelled at the unusual lightness of many of the attacks, this was by no means without exception, and some few fatal cases occurred. Since then the same or a similar strain has apparently been evolved which involves little danger to life, but whose resemblance to Smallpox of text-book type is so great that it is practically impossible to separate them.

Under these conditions the problems that fall to be seriously considered by medical officers and by local authorities are twofold :—

1. As the disease is so mild and practically without danger to life, is it worth while taking all the arduous precautions to prevent its extension amongst a population who, while they have an academical objection to being protected by vaccination, apparently welcome the protection against normal Smallpox which this mild type appears to afford equally with vaccination. Why not let them be immunised, if they prefer it, by a mild form of disease which is as effectual as vaccination, and thus avoid the usual irritating side issues raised during an outbreak by the anti-vaccinator. The people may thus become immunised, practically vaccinated, without knowing it and willingly —a position not without its element of humour.

One has been able to reconsider the whole question as to the duality or unity of mild Smallpox and of the disease called Alastrim by the admirable articles of Prof. Ricardo Jorge (Lisbon) reprinted in the *Lancet* of 20th and 27th December, 1924, and it now appears to be an undoubted fact that there has been evolved—no one knows how—a species of the genus Smallpox which breeds true through many successions of generations, is consistently mild, and is practically without

danger to life, but which is clinically Smallpox up to a point when it aborts and leaves the patient uninjured and protected. If this is so there would seem to be little need to worry about it, but it is first necessary at the *beginning* of an outbreak to make absolutely sure that it is "Alastrim" (or mild Smallpox) and not virulent Smallpox masquerading as so-called Alastrim that one is dealing with, or there would be some distressing and disastrous awakenings. It must be remembered that a fresh but undetected introduction of normal Smallpox might readily occur amongst an already established group of true Alastrim, which would need sedulous care to prevent the development of a serious and fatal outbreak. Indeed the best way would appear to be to deal with it as we did in 1903–4, but this must be done right from the beginning if success is to be achieved, for its infectivity is real and pronounced and its very mildness creates further difficulties through the non-recognition of cases. It is important also not to set alight the controversial issue of vaccination which always hampers effectual action.

2. The second important point to be considered is the economic question, the effect upon outside opinion of the knowledge that a disease indistinguishable from smallpox exists in a District. Grievous loss, not only of prestige, but real material loss accrues to a City thus situated, and if this can be avoided by meticulous and unremitting care in dealing with the beginnings of an outbreak of this sort, however mild, it should be done.

The continued immunity from fatality which not only accompanied the Gloucester outbreak of 1923, but has persisted through its further extension northwards, may have the unfortunate tendency to produce a feeling of indifference amongst both Sanitary Authorities and the public. To counteract this let us consider the experience recently recorded from America.*

Canada had apparently for some time experienced a widespread epidemic of mild smallpox similar in kind to that at present in England, and that Continent had possibly been lulled into a feeling of false security. A rude awakening was to follow :—

No less than 3,999 cases of Smallpox with 133 deaths were reported in the State of Michigan during the first six months of 1924. More than three quarters of the cases and over 100 of the deaths were in the City of Detroit. Then followed an enormous demand for vaccination, in which even Christian Scientists are said to have joined, while the anti-vaccinator stood aloof and ceased from troubling. Subsequently an outbreak of quite exceptional virulence attacked Detroit and the neighbourhood, of which a graphic account is given by Dr. F. Adams, M.O.H.* for the Essex Border Municipalities. This account should be read. Briefly, the outbreak commenced with

* "The Medical Officer." 13th December 1924 Supplement, p. 7.

hæmorrhagic cases which as usual were unrecognised and so led to immediate extension. The total figures read thus :—

	Cases.	*Deaths.*	*Fatality*
Never successfully vaccinated	45	32	71%
Vaccinated successfully 12 to 65 years before	10	0	0
Vaccinated successfully in incubation period, *i.e.* came down ill with Smallpox and a taking vaccination	12	0	0
Totals	67	32	48%

The Local Board of Health had an unusual constitution in consisting entirely of doctors, all of whom had been Health Officers. Without more ado they determined on and carried out the universal vaccination of the whole population, and the disease was stayed. The very clear and well written account by Dr. Adams is worth careful study, and contains many of the instances showing the sure protection afforded by vaccination which are commonplaces in our own experience and in that of every outbreak.

The moral to be drawn is not to despise the Enemy, who may assume Protean disguise wherewith to catch the heedless unawares.

It behoves then every practitioner to be alert, and every Health Department to be promptly helpful in advice, any species of Smallpox must perforce be treated with respectful suspicion, and above all it must never be forgotten that precautions with the introductory cases are of infinitely greater value and effectiveness than much endeavour when the inevitable geometrical increase of a neglected introduction has commenced. This has been well stated by Dr. Monckton Copeman :—

> " Personally, I think that in all probability, under special circumstances various stages of varioloid disease may originate between that type to which the name of Alastrim (or, in South Africa, Amaas) has been given, and that which in this country is ordinarily regarded as typical smallpox.
>
> " But whether or not this be the case it is obvious that, from the practical point of view, and in the present state of our knowledge, it is only by the taking of all precautionary measures as if in presence of an outbreak of ordinary smallpox that we can hope effectively to prevent the spread of the disease."

* Extract from Annual Report of the Chief Medical Officer, Ministry of Health, 1919–1920. Appendix 11, p. 280.

A Few Points in the Differential Diagnosis of Smallpox and Chicken Pox.

Read at a Meeting of the West of England Branch of the Society of Medical Officers of Health, July 19th, 1923.

In examination, Examine the WHOLE Body, and in a good light.

One cardinal point is the characteristic distribution of the Smallpox eruption. Plate I. illustrates this. Though there is only a moderate quantity of eruption, there is most on the face ; after the face, on the hand and upper extremity. From the hand upwards the eruption diminishes in quantity. On the front part of the trunk it is deficient, especially on the abdomen.

Contrast with this Plate II., showing the distribution in the case of Chicken Pox. Here the eruption is most abundant on the trunk, and on the face it is more scanty than on the chest, the lineal gradation of quantity is what is usual in Chicken Pox, *e.g.*, more on the upper arm than on the forearm: the eruption also occurs in the axilla, which is unusual in Smallpox.

Many minor peculiarities of distribution on the face, neck ; on prominences, avoiding hollows of the body ; on places exposed to irritation, as by a tight garter, by a mustard plaster, etc., may be studied in detail in Rickett's Monograph.*

While this question of distribution is of prime importance, we must remember in this, as in every other disease, not to base our judgment on any one diagnostic point, but to observe all the points to be considered, and then make our diagnosis on the balance of evidence, for almost every single diagnostic point is liable to variation, whence may follow a wrong diagnosis.

Beware of the fallacy " *because there is only a sparse eruption, therefore it must be Chicken Pox.*" As a fact, it is often the case that on a person partially protected, as by a distant vaccination, the total number of actual pocks is quite small, but the distribution of these few pocks on face, and forearms, and wrists, quite typical. On the other hand the Chicken Pox eruption may be, and often is, large in quantity, but must be sought for on face, and especially on chest and abdomen, as well as on the extremities, in which it usually prefers the upper arm and thigh.

Distribution alone, however, is occasionally apt to mislead, and attention must be paid to the character of the eruption itself. It is better to speak of the " eruption " rather than the " rash " when meaning the true Smallpox eruption, reserving the title of " Rash " for the various preliminary rashes which may occur during the primary fever.

*The Diagnosis of Smallpox by T. F. Ricketts, M.D.—The Waverley Book Co., 1908

Character of the Smallpox Eruption.

The papule—at first a pin's head fleck, soon swells up into a raised, hard, solid-feeling pink mass—the papule. In a day or two the round-topped papule gets vacuolated at top, enlarges, and by the fourth day is grey and translucent. The smaller vesicles are hemispherical, the larger ones are flat-topped, and the top is sometimes indented. This cupping of the top of the vesicle is diagnostic only in the case of the *forming* vesicle ; spurious cupping may readily be observed in late pustules or in the pustules of Chicken Pox, when it may be due to absorption of some of the contents, and the consequent falling in of the roof of the pustule.

The vesicle remains clear only for some twenty-four hours ; it becomes dull and whitish, and ringed, and its contents turbid. It thus gradually becomes a Pustule. By the sixth day it has turned yellow, contains pus, swells up from flat to hemispherical, and is *mature*.

An areola—a narrow erythematous zone—surrounds the enlarging papule, and attains its height with the fully formed vesicle. The vesicle of Smallpox is usually multilocular.

Depth of the Lesion.

By inspection and palpation it is possible to arrive at some decision as to the comparative depth of the lesion. The eye may be a better judge than the hand. The lesion of Smallpox, which is situated in the mid-deeper layers of the *epidermis*, juts through the skin and lifts the horny layers above it *at an angle*. Lesions like Acne pustules, or deep-seated syphilides rooted in the deeper parts of the corium have a greater thickness of skin to push before them, and bulge up from below with a more gradual slope. On the other hand, superficial vesicles, such as those of Chicken Pox, appear to lie on the surface of the skin rather than within it. Though the vesicle of Smallpox has a steep gradient of slope, it joins the flat skin surface with a rounded angle. But the vesicles of Chicken Pox when the wall is thin enough, spring abruptly from the surface like bubbles on soapy water.

Chicken Pox.

Chicken Pox is not uncommon amongst adults, and occurs up to middle age, and adults get by no means sparse eruptions. Although prodromal fever in Chicken Pox is not the rule, it may occur, and Ricketts states that in very mild Smallpox the eruption may be the first symptom. My experience in the mild Smallpox of 1903 and 1904 was, however, that it was the rule to get a fairly severe prodromal fever, much out of proportion to the mildness of the subsequent attack. However, Ricketts is no mean authority, and one should be on guard.

Distinctive Characters of Chicken Pox Lesions.

Obvious superficiality of vesicles. Difference between scabs of Chicken Pox adhering to surface and the counter-sunk scabs of Smallpox.

Absence of loculation is a feature of Chicken Pox, but multilocular vesicles may occur in Chicken Pox, and unilocular vesicles are not an uncommon feature of Smallpox.

PLATE I.

Smallpox. From a photograph by H. C. Leat—a case in the Gloucester epidemic, 1923.

PLATE II.

Chickenpox. From Ricketts and Byles—"The Diagnosis of Smallpox."
By kind permission of the Publishers.

Outline of Chicken Pox Vesicles.

Many of the vesicles assume an oval outline, especially near flexures of the skin, owing to superficial vesicle following line of flexure. Many of the vesicles may have a jagged or irregular outline. On the other hand the vesicles of Smallpox preserve, as a rule, a definitely circular outline, but very superficial variolous vesicles may, by reason of their superficiality, present a somewhat irregular appearance. Two minor points—absence of umbilication in the forming vesicle, and efflorescence in crops. Indentation of a number of vesicles is good evidence against Chicken Pox, but not the dimpling of a few. The absence of the sign counts for nothing either way.

The presence of lesions in different stages of evolution on one and the same small area must not always be expected of Chicken Pox, and when it exists is not necessarily valid evidence against Smallpox, which in certain modified types shows somewhat the same condition.

Distribution.

Chicken Pox may appear on any part of the body—on the trunk, limbs, head, on the palms, soles, scalp, ears, palate and buccal mucous membrane. But the real seats of selection in Chicken Pox are the trunk, to which it may be limited; the face, where it may be as dense as on the trunk. Smallpox chooses the face before all; next, the arms; thirdly, the back or legs. While Smallpox least affects the front of the trunk, the eruption of Chicken Pox is often as abundant there as on the back, or more abundant, and Chicken Pox tends to avoid the limbs, but may affect them, when it shows no preference for the extensor surfaces, which Smallpox does.

These are some of the rules generally observed by these diseases, but exceptions to one or all of the rules may be met with and may thus make the correct diagnosis a matter of personal equation in assigning due weight to the various factors.

DIPHTHERIA IN BRISTOL,

The disease appears to be of respectable antiquity though it is very difficult to identify every form of recorded angina.

In 1389, however, a disease, probably Diphtheria, carried off a large number of children in England, and between 1745–50, outbreaks occurred in Cornwall, and later in the century, in London.

At the end of the eighteenth century, Diphtheria, though still existent, no longer prevailed in epidemic form, but it persisted meanwhile in France, and in 1859 reappeared in the South of England, probably introduced from the Continent, and spread widely and fatally.

As Diphtheria was, previously to the year 1855, not separated in the Registrar General's death returns from Scarlet Fever, accurate statistical evidence is not obtainable, but from 1855 onwards, the returns are of considerable interest.

The abrupt rise, between the years 1857 and 1859, after a long period of quiescence, was followed by an equally abrupt fall to a moderate average and this is characteristic of the general behaviour of the disease, which observes cyclical periods of prevalence after irregular and somewhat prolonged intervals of quiescence.

During its prevalence from 1860 to the end of the century, Diphtheria, at first favouring sparse localities and country districts, became more and more established as a town disease, and this change may be not entirely disconnected from the increasing regularity of school attendance under the provisions of the 1870 Education Act.

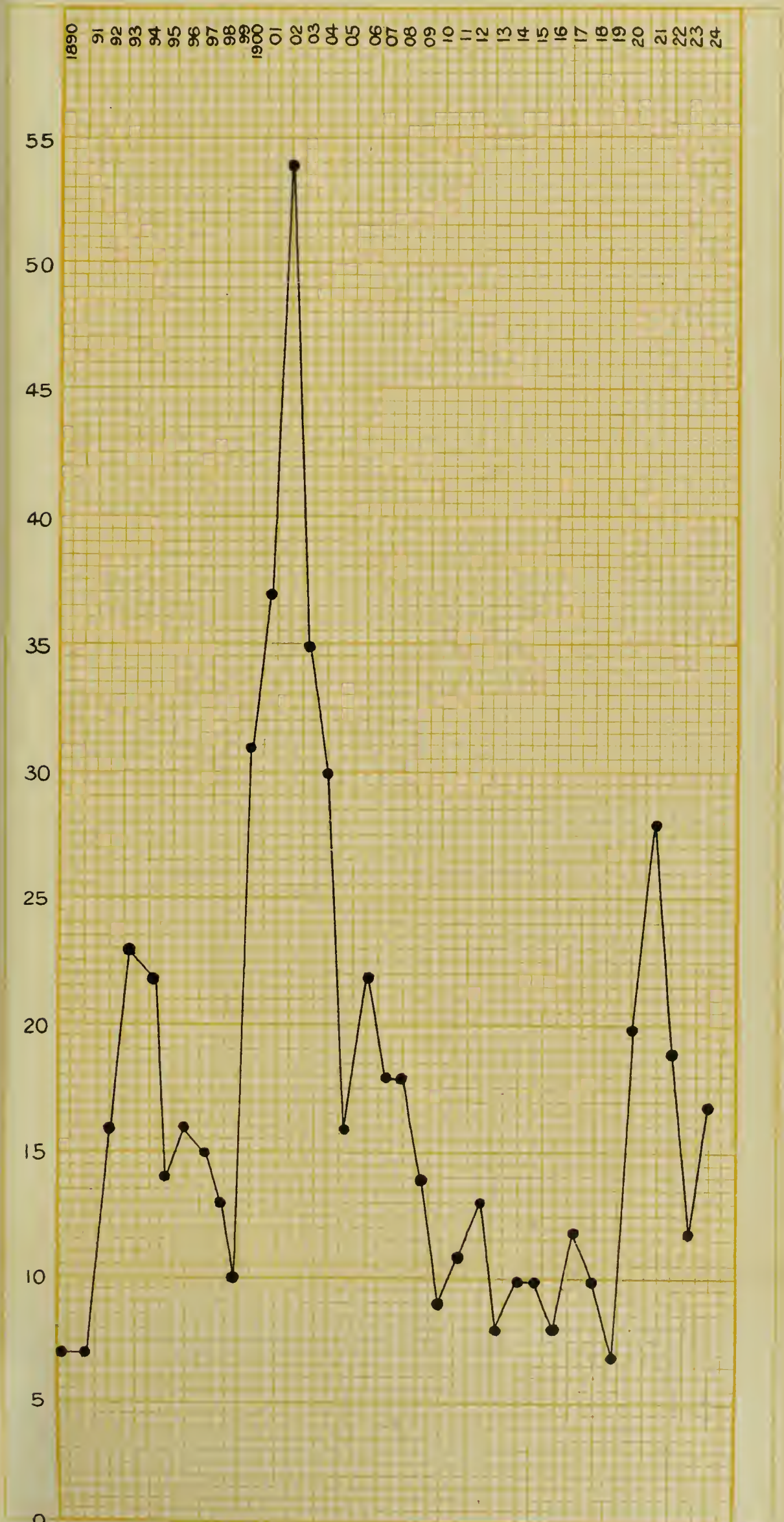
While the age susceptibility to Diphtheria is greatest at ages 1—5, the mortality between 5 and 10 years is still extremely high, so that school attendance, bringing together, as it does, children at susceptible ages for many hours in close proximity with many opportunities for direct or indirect contact, assumes much importance in the case of a disease which inhabits the mouth and nose cavities and which depends for its spread upon transference of infective material from the sick to the healthy.

Diphtheria observes with much regularity a seasonal prevalence having its highest period in the December quarter, and its lowest period during the summer months, and the disease is commoner in temperate and cold climates than in tropical countries. It is highly probable that cold and wet influence the delicate mucous membranes towards susceptibility; the actual infection must, however, be received from an existing case.

The opinion that Diphtheria is a filth disease, and that insanitary conditions are a direct cause, is no longer tenable; though such conditions may, no doubt, as may damp or inclement weather conditions, act as predisposing causes by rendering the mucous membranes susceptible. The influence of the "carrier" condition, whether in a convalescent or in

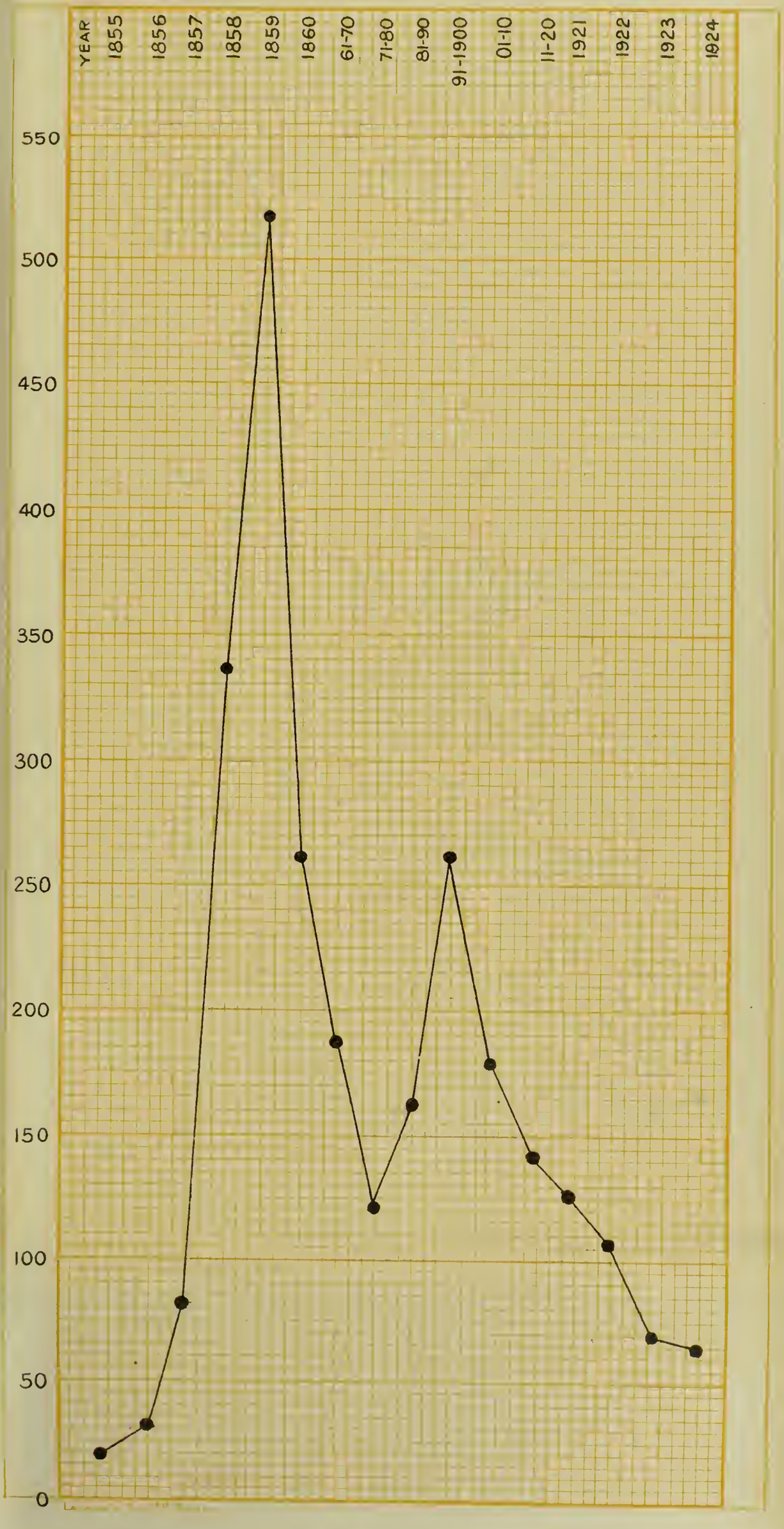
BRISTOL.

DEATHS FROM DIPHTHERIA PER 100,000 LIVING



ENGLAND AND WALES.

DEATHS FROM DIPHTHERIA PER MILLION LIVING



an apparently well person, was, until recently, imperfectly recognised, though Gresswell pointed out to the Epidemiological Society in 1885–86 the possibility that Diphtheria might persist after attack as a chronic malady.

It is an interesting and important fact that Diphtheria does not single out for attack the slum areas of a City, but may prevail in any district, rich or poor, where there is a sufficiency of children at susceptible ages who have the opportunity of inter-communication.

It may be assumed that children living in congested districts have more frequent opportunity of exposure to minimal or sub-infective doses of Diphtheria whereby they attain a certain measure of immunity, much in the same manner as in the case of Measles, Tuberculosis, and probably of most infections which are constantly present in the personal environment in populous communities.

Diphtheria did not become an urgent problem in Bristol until early in the nineties, neither did it make any call upon the Hospital accommodation nor was it a serious difficulty in relation to school attendance. All this was changed by the wave of prevalence which, starting late in Bristol (about 1894), persisted over the end of the century, reached its highest point about the year 1902, and since that date, though less urgently prevalent, has caused continuous anxiety.

The introduction of Antitoxin about the year 1894 placed a powerful remedial measure, almost infallible if used early and boldly, in the hands of the physician; while the previous recognition of the causal organism by Klebs and Loeffler in 1883–84, gave valuable aid, first in confirmation of clinical diagnosis, and, secondly, in the searching out of contacts; aid which, so long as bacteriological results are used to supplement and not to supplant clinical observation, and are not accepted as any excuse for delay in administering Antitoxin, is also invaluable.

During the first three quarters of 1921 the deaths from Diphtheria showed no remarkable excess above the mean; although in January a sharp outbreak in the wards of the Southmead Infirmary of the Bristol Union gave significant emphasis to the fact, already noted in the City Hospitals, that a peculiarly virulent type of disease was present in the District, necessitating the use of double or even treble doses of Antitoxin for effectual treatment.

It is difficult to account fully for this accession of virulence, which probably depends on more than one factor, but it is worthy of note that Newsholme, as long ago as 1898, propounded a thesis that a succession of dry years tends to be accompanied or followed by a heightened prevalence and a more severe type of Diphtheria. It is reasonable to suppose that, after such a continuance of dry seasons, the sensitive mucous membrane is more readily influenced towards susceptibility by cold or otherwise inclement weather. 1921 was a year of drought.

The Southmead outbreak affected 15 children of whom 5 died, and 34 other cases, apparently of independent origin and all followed by recovery, occurred at the associated Cottage Homes. Four members of the Staff also had slight attacks.

During the year 1921, 1,426 cases were notified and 107 deaths occurred in the City. The main outbreak commenced in September, and though scattered, was at first notably in excess in certain streets in Bedminster. The neighbouring schools were proved not to be centres of infection, and as it appeared to be a " home " outbreak, every contact in these streets was searched out and tested for the presence of the Diphtheria organism. Subsequent extensions were similarly dealt with.

During the year 1922, 886 cases were notified and 74 deaths occurred. The outbreak of the previous year showed signs of abatement in February, and the disease remained fairly quiet during the remainder of the year, but the virulent type of disease was still present, and in October five cases occurred in one family and three died, two on the second day of the disease.

737 cases were reported and 49 deaths occurred during the year 1923. The disease was not in excess through the first nine months, but a sudden rise in the number of cases occurred in October and November and subsided in December.

In the year 1924, 979 cases were notified and 63 deaths occurred. The disease, which had not previously been particularly troublesome, showed alarming signs of activity during the second week in October when 42 cases were reported as compared with a weekly average of 13 cases during the previous nine months, the outbreak continued throughout the remainder of the year, and " P " Block (Sanatorium) at Ham Green had again to be pressed into service.

In the 1902 outbreak, School attendance played a much larger part in the spread of Diphtheria, and special arrangements for preventive treatment had to be made at various centres.

At present, suspicious contact cases have to be accommodated, if at all, in Hospital, with the result that not only have the fever wards been fully occupied with Diphtheria, to the exclusion of other disease in urgent need of isolation, but the cases have overflowed into the female Sanatorium Wards, which are thus no longer available for their legitimate purpose. In 1902-3-4 Clift House was open, and was intermittently used in relief of Ham Green for Diphtheria ; this relief is no longer available and is greatly missed.

The " Schick " Reaction—Protection by Toxin-Antitoxin.

The main importance of the Southmead outbreak (1921), is that it gave opportunity for acquiring a practical acquaintance with a procedure which, in the hands of observers in America, where Diphtheria appears to be far more in evidence

than in England, has proved highly satisfactory in protecting threatened groups or communities against Diphtheria.

In order to ensure the adequate protection of the population, the New York system provides a Medical Service for carrying out the testing and immunising, especially amongst the School population.

Briefly the procedure is this : Upon the occurrence of a case of Diphtheria in a school or institution—

1. All contacts are first of all *tested* (Schick reaction) this test shows which are susceptible or likely to take the disease, and which are insusceptible. This is determined in the course of a few days.
2. All susceptibles are then *protected* by the proper administration of the protective agent—reinforced on two occasions at weekly intervals, when an active immunity is developed which is found to persist over at least three and a half years.

The necessity for immunising the City Hospital Staff was emphasised by the fact that within three months four members of the Nursing Staff at Ham Green contracted Diphtheria, while six members of the Novers Hill Staff also suffered, though no Diphtheria was knowingly admitted to the Wards. In 1920, no less than 12 members of the Staff at Ham Green contracted Diphtheria, one of whom died of a virulent attack ; and in 1921, 11 further cases occurred.

The Health Committee, recognising the very great risk run by unprotected nurses in dealing with the severe type of Diphtheria prevalent in recent years, decided in 1922 to afford protection to their Staff, so that they might enjoy a similar immunity in regard to Diphtheria as they have for many years experienced in regard to Smallpox.

Setting aside for the moment the gain in escaping weeks of sickness, the economic value to the City is appreciable. Thus 329 working days have been saved.

The Resident Medical Officer informs me that he has in this way protected some 300 members of the Hospital Staff since January, 1922, and in no instance has the reaction been severe enough to cause them to go off duty ; also, up to February, 1925, no completely immunised member of the Staff has ever developed clinical Diphtheria, although one or two have had sore throats, found morphologically to be caused by the bacillus of Diphtheria. The organisms have in each case been tested and found to be non-virulent.

On 12th February, 1925, however, an immunised nurse had a semi-membranous throat, and gave a morphological result of K.L.B., which was tested for virulence, and proved to be highly toxic to the guinea pig. The patient suffered only from a modified attack and made an uninterrupted recovery without antitoxin.

In brief, while a high degree of immunity is generally enjoyed by fully immunised nurses though in the closest contact with virulent clinical Diphtheria, the few who do contract the disease appear to be protected against dangerous or fatal attacks.

(See Dr. Peters' Report—under " Ham Green Hospital ").

I have taken this opportunity of pointing out the constant sickness and regrettable mortality caused year by year by Diphtheria in the City in the hope of stimulating a demand for effective preventive measures. Until recently this prevalence appeared to be unavoidable and endeavour was devoted to limit the spread from known cases, with none too favourable success. One or two school outbreaks have caused serious loss of school time as well as danger to the attacked, and even Hospital Staffs have fallen sick and caused added pressure on the few available beds. The remarkable results recorded by Dr. Peters amongst the Ham Green Staff prove that our original guarded scepticism was unjustified, and now that the disease is definitely preventable it is unwise to persist in the old way and to fill hospital beds unnecessarily. Just as we have protected our own nurses so every school and every institution ought to insist upon the protection of its scholars against Diphtheria. The protection of communities undertaken on a large scale in America has only been adopted in isolated instances in England. In Scotland, however, during last year the first serious attempt in this Country to protect all the school children against Diphtheria was made by Drs. Robertson and Benson in Edinburgh. The work is reported at length in the *Lancet**, but, briefly, it may be noted that parental consent was obtained for the testing and protection of 43.3% of the children on a first application, and at a later visit to a school, consent was obtained to immunise 50% of the remainder, this shows that the parents were satisfied that the children protected on the first occasion had not suffered in any way from the process.

MILK AND MILK SUPPLIES,

During the year 107 samples of milk have been taken :—

For Tubercle Examination	50
For Tubercle Examination Repeats ...	5
Certified Milks for the Ministry of Health ...	23
Grade "A" Tuberculin Tested	1
Grade "A"	1
Pasteurised	10
Special Milk Samples	17

The 50 milks taken for Tubercle Examination gave two positive and one suspicious result. In dealing with the positive results, the producers' farms were visited with Mr. Henson, Veterinary Surgeon, and each cow examined ; this necessitated the taking of five samples of milk from suspicious cows. At one farm no definite results were obtained, but further samples will be taken at a later date. At the other farm also no positive results were obtained. Some of the reports of these milks gave dirt and pus in large amounts, these results were communicated to the Medical Officer of Health for the County in which the milk was produced.

* "The Lancet," November 8th, 1924 p. 949. Diphtheria prevention Robertson and Benson.

Samples of mixed milks were *taken in duplicate* from the supplies to Ham Green Hospital and Sanatorium, Novers Hill Hospital and Frenchay Sanatorium and submitted to analysis. Also special samples of milk from Frenchay Sanatorium. The City Analyst in his reports of the milks submitted to him gave the following results :—

Ham Green Sample—

Fat	...	3.15 per cent.
Non-Fatty Solids	...	8.7 ,,
Total Solids ...	...	11.85 ,,

B. Coli absent from .1 c.c.
Bacteria count 4.600 per c.c.
Placed in Category 2.

Novers Hill Sample—

Fat	...	3.8 per cent.
Non-Fatty Solids	...	8.75 ,,
Total Solids ...		12.55 ,,

B. Coli present in .1 c.c.
Bacteria count 89.000 per c.c.
Placed in Category 2.

Frenchay Sanatorium Sample—

Fat	...	3.55 per cent.
Non-Fatty Solids	...	8.55 ,,
Total Solids ...	...	12.1 ,,

B. Coli absent from .1 c.c.
Bacteria Count 36.000 per c.c.
Placed in Category 2.

Of the 23 *samples of Certified Milk* taken for the Ministry of Health, the lowest Bacteria Count was 100 per c.c., the highest 1.118.000, another sample giving a count of 320.000 per c.c. Leaving out these two exceptional counts, the 21 remaining samples gave an average count of 3858 bacteria per c.c. The Certified Milks coming from Dorchester, Melksham and Wincanton are about 20 hours old before they are dealt with by the City Analyst.

The *Grade "A" (Tuberculin tested), Grade "A" and Pasteurised Samples* of Milk gave results to conform with the requirements of the Orders.

Regarding the 17 *Special Samples* of milk taken and submitted to the City Analyst, nine of these samples were taken (Maternity and Child Welfare Section) from purveyors of milk who have been debarred from receiving orders of milk grants from that Section on account of previous convictions against them for the *Chemical Standard* of milk. The rule followed is that when a purveyor of milk has a conviction recorded against him, his name is removed from the list of accredited purveyors for twelve months, at the end of that period samples of milk are taken from those removed to give them an opportunity of re-instatement.

The reports received from the City Analyst of the samples taken from the nine purveyors show that neither of these purveyors milks conform to the bacteriological standard; although as regards the chemical standard of the milks submitted they all conform to the requirements of the Food and Drugs Acts.

MATERNITY AND CHILD WELFARE.

Excellent as is the work secured under the existing Regulations and within the available powers, it has always been present at the back of one's mind that in order to be truly preventive rather than merely palliative, the question of good parentage ought to be brought within the arena of social politics, not only in relation to maternity and child welfare, but also in relation to School work, in regard to which the Professor of Education at St. Andrew's University has wisely remarked "the most important requirement in Education is the possession of good parentage." If this is true of Education, as it undoubtedly is,it is doubly true in regard to Infant Welfare. Much spadework in the way of propaganda will be needed before the Eugenic idea, so misunderstood and so little popular, comes into practical politics, and its unpopularity is clearly evidenced by its failure to appear in any Government Scheme, whether for Infant Welfare or for Education. The question asked in the House on October 2nd, as to sterilisation of the unfit, is, however, a sign of some dawning recognition of the principles of heredity.

With regard to propaganda, the mere arrangement of a course of Lectures appears to me to be inadequate and ineffectual, and audiences attending a free show without any present personal interest in the subject will derive little or no benefit beyond exchange of confidences on local gossip ; advice proffered in the homes when sickness is present by a tactful and well-trained Health Visitor or Home Nurse, or given at the School for Mothers where all the interest is centred on babyhood, is fruitful in good results, and it is by extension of this work rather than by the academic multiplication of lectures that the greatest good is to be secured.

FLUES FOR GEYSERS.

In the Annual Report for 1923 I dealt at some length with the danger of fixing Geysers without proper flues to carry away the products of combustion, which had already caused five deaths in little over a year; and I reprinted the Gas Company's excellent memorandum of warning. The warnings have apparently been disregarded, and I have recently received this letter from a medical practitioner in Bristol :—

> " . . . recently I have found several gas geysers without a flue, and will be pleased if you will use your influence to stop this. If the sellers of gas fires were pulled up it would be a good thing ; they seem to put them down with no regard to the products of combustion, and I think this should be penal."

The Gas Company has recently issued very complete technical instructions to plumbers as to the proper manner of installing gas apparatus, so there should be no room for misunderstanding.

While this Report is in the press another case of nearly fatal poisoning by the fumes from an unventilated Geyser has come under notice.

OFFICIAL MEMORANDA.

I. Ministry of Health.—Memorandum on the duties of Medical Officers of Health in England and Wales (with Circular 562, dated 3rd April, 1925).

II. Ministry of Health.—Memorandum on Closure and Exclusion from School (Issued jointly by the Ministry of Health and the Board of Education, 1925).

These re-issues are frankly disappointing, in that they still have to admit duality of control, and to advocate "co-ordination," which is after all a poor substitute for unity of control. In I. (vi.) Care of the Blind is cited as coming within the purview of the County Borough M.O.H., but Mental Deficiency is omitted, though administratively it might well be included and is certainly a concern of Public Health.

I am, my Lord Mayor, Ladies and Gentlemen,

Your obedient Servant,

D. S. DAVIES, M.D., LL.D., D.P.H., etc.,

Medical Officer of Health, City and County and Port of Bristol; Administrative Med. Supt. City Hospitals; Lecturer in Charge of Public Health, University of Bristol, and Internal Examiner to the University; sometime Examiner to the Universities of London, Cardiff and Belfast, and to the Conjoint Board; late Medical Inspector to H.M. Loc. Govt. Bd. on Cholera Survey and General Sanitary Survey of England; Surgeon-Col. 1st Glos. R.G.A. (V.), retd. V.D. Lt.-Col. R.A.M.C. (T.), retd., etc.

CITY OF BRISTOL.

HEALTH DEPARTMENT.

Retrospect for 1924.

Population and Acreage.

The estimated population of the City at the middle of 1924 was 386,200 (excluding non-civilians), upon an acreage of 18,445 acres.

Births.

During the year 1924, 7,212 births were registered, corresponding to an annual rate of 18.67 per 1,000 population, compared with a rate for 1923 of 19.33, for 1922 of 19.92, for 1921 of 22.03 and for 1920, of 25.6. The Birth Rates as corrected by the Registrar General are—for 1924, 18.4; for 1923, 19.5; for 1922, 20.1; and for 1921, 22.3. (The rate would be better calculated, not on population, but as a rate per 1,000 women living at child-bearing ages (15—45).

The birth-rate, which for the decade 1880-89, was 31.4, steadily declined year by year to a minimum in 1918 of 16.1. A similar decline during the last 40 years has been noted in most civilised countries.

The causes of decline in the birth-rate in recent years are chiefly four :—

(1) Deliberate birth control.
(2) Postponement of age of marriage.
(3) Increasing celibacy due to cost of living and employment difficulty, and, during the war
(4) Absence of men from country on war service.

The social bearings of high and low birth-rates and infant mortality rates may be summarised thus :—

(1) A high birth-rate with many surviving children will in time cause industrial overcrowding.
(2) A high birth-rate with high infant mortality rate is simply deplorable.
(3) A low birth-rate with few survivors is equally undesirable.
(4) A low rate with many survivors may possibly mean the solution of many social difficulties.

A vast population, more than a country can support, needs Colonial outlet, or means starvation, and this condition in Germany may have been one direct cause of the War. Colonies need sea-control and command of the Channel Ports. On the other hand, the development of a country may be delayed owing to lowness of birth-rate. A happy mean is desirable.*

* Hewlett & Nankivell—Principles of Preventive Medicine, 1912.

Marriages.

2,924 marriages took place within the Borough of Bristol during 1924, compared with 2,998 in the year 1923. The annual marriage rate per 1,000 is thus 7.6 compared with 7.8 in 1923.

Infant Mortality.

The Infant Mortality Rate per 1,000 births for 1924, was 71.68, compared with a rate for 1923 of 62.49, for 1922 of 74.1, and for 1921 of 67.8. The Infantile Mortality Rates, as corrected by the Registrar-General for transferable deaths from or to outside districts are—for 1924, 69; for 1923, 69; for 1922, 71; for 1921, 66; and for 1920, 69. The rate for the decade 1890-99 was 147-5, with a birth-rate of 29.0, and the infant mortality rate did not show notable decline until 1907, when it fell to 100.9. In 1910, the rate was 90.3, but again rose in 1911 (a remarkable summer with warmth prolonged into autumn) to 142.8. Since 1915 it has only exceeded 100 in one year, 1917, when it was 102.0. The early summer of 1921, when the infant mortality was at its lowest, was remarkable for its warmth and continuous drought, but this was not continued through the later summer months.

One chief factor in infant mortality is the infant diarrhoeal mortality accompanying continued high temperatures in the late summer and autumn.

Some part at least of the improvement may be ascribed to Infant Welfare work, how much it is hardly possible to say until we are subjected to the acid test of prolonged summer heat.

Death Rate.

The recorded Death Rate for 1924 (uncorrected for age and sex distribution) is 12.80, calculated on a population of 386,200, estimated to mid-year, 1924, compared with 11.72 in 1923, 13.2 in 1922, 11.4 in 1921, 12.6 in 1920, 13.1 in 1919, and 17.2 in 1918 (Influenza year).

The adjusted Death Rate as given by the Registrar-General for 1924 is 12.0, for 1923 is 11.2, for 1922 is 12.8, for 1921 is 11.1, for 1920 is 11.7, for 1919 is 13.4, and for 1918 is 17.1.

When we find that, at the date of Clark's Report, 1850, the average general death rate over a period of 7 years was 27, in the 'seventies averaged about 21, in the 'eighties from 16 to 19, and has fallen steadily to the present time, there would seem to be reason for congratulation. So there is, and the gradual and continuous improvements form an index no doubt of the social betterment in domestic conditions, of the influence of the "New Humanity" continued from the eighteenth century and fostered by Lord Shaftesbury and others, in regard especially to conditions of employment, to the provision of the prime necessaries for decent communal existence, unpolluted water and efficient removal of waste matters, supplemented by supervision of things possibly harmful, and, more important, by some supervision of persons, and aided by some rudimentary development of a "Sanitary conscience" in the individual.

Under these influences general morbidity and mortality would be likely to decline from general diseases, as well as from that small group of intestinal communicable diseases exemplified by Cholera and Typhoid, which are directly amenable to "sanitary" influence as generally understood. "Sanitary" endeavour alone has probably done most of what it can towards control of disease, it must be maintained, but other more direct means founded on knowledge of the etiology of individual diseases are necessary in addition.

The most fatal of the communicable diseases are shown in these figures for the ten years, 1905-1914 and 1915-1924, none of which bear any direct relation to insanitary conditions :—

	1905-1914	1915-1924
	Deaths.	*Deaths.*
Measles	1,032	649
Whooping Cough ...	841	511
Diphtheria ...	533	527
Scarlet Fever ...	182	100
Smallpox	12	8
	2,61)	1,795

which averages 261 a year for the first period 1905-1914 and 179 for the period 1915-1924,

The efficient safeguards are Hospital accommodation, an adequate medical staff for enquiry into home, school or institution infectious sickness before the development of an epidemic, and time and opportunity for continuous pathological investgation and research, none of which are fully available.

COMPARATIVE RATES.

	Death Rates					Infant Mortality Rates				
	1920	1921	1922	1923	1924	1920	1921	1922	1923	1924
Birmingham	12.6	11.2	11.9	10.7	11.5	83	82	85	71	80
Liverpool	15.7	14.3	14.5	13.5	13.3	111	105	94	98	102
Manchester	13.0	13.6	14.0	13.1	13.7	94	94	94	85	97
Sheffield	13.2	12.5	11.6	11.3	11.5	104	98	81	89	88
Leeds	14.3	13.5	13.7	12.6	14.1	105	96	97	85	102
Bristol	11.7	11.0	12.8	11.2	12.0	69	66	71	61	69

(*Registrar General*).

Hospital Accommodation.

The deficiency in Hospital accommodation, and its failure to increase commensurately with the increase in population, has been noted for some years, and in 1914 suitable extensions were authorised by the City Council and approved by the Local Government Board, but were deferred owing to the War. In the meantime, expenditure in relation to Tuberculosis, Infant Welfare and Venereal Disease has risen so enormously that progress in other directions is checked, and at the same time a campaign has been started decrying the value of Isolation Hospitals. Many of the criticisms err in dealing with communicable diseases as a whole, whereas they differ one from another so materially in causation and methods of spread, that the relative value of Hospital Isolation varies

for each form of disease. For example, there can be no question that isolation is imperative for preventing spread of Smallpox, while in Diphtheria, this end, though also served, is perhaps secondary to the advantage in life saving of specialised medical service and of necessary operative relief immediately at hand. Scarlet Fever has proved disappointing to the ingenuous aspirations of the 'seventies, but isolation in this disease, as in Measles, coming from overcrowded houses, means not only saving of life but avoidance of the evolution of septic types of disease. Isolation Hospitals are erected out of the rates, not to save trouble to householders who have means of isolation at hand, but to protect the public by isolation where this is impossible owing to home conditions. It is the judicious use of a reasonable amount of hospital room, rather than the indiscriminate use of a superabundance of beds, that is of public health value.

The position in regard to Hospital accommodation which, in place of the approved 1 bed per 1,000, does not afford more than 240 beds in all for a population of 385,600 people, has been emphasised on several occasions during the present century, and has caused considerable anxiety and grave difficulty in 1902-3-4, during a concurrent outbreak of Scarlet Fever and Measles, in 1913 with Scarlet Fever, and again during 1921 and 1922, when, in the absence of Clift House as a reserve, the Sanatorium Blocks have had to be pressed into service. Some projected hospital extensions were approved by the Council in 1914, when the war intervened.

Bearing these facts in mind, the Council on 8th April, 1924, approved the Health Committee's Report to provide 56 additional beds at Ham Green Hospital, the plans for which are now approved and the work is in hand.

The total number of Notifiable and Non-Notifiable Infectious Diseases visited by the three Home Nurses during the year 1924 was :

Scarlet Fever	812
Diphtheria	922
Erysipelas	167
Enteric Fever	39
Cerebro-Spinal Fever	3
Malaria	13
Dysentery	5
Encephalitis Lethargica	154
Polio Encephalitis	2
Anterior Poliomyelitis	8
Whooping Cough	134
Chicken Pox	684
Measles	396
Mumps	984
German Measles	19
Total Cases	4,342

This total includes primary visits only and does not include many re-visits to home nursed cases to ensure that proper precautions against the spread of infection are being observed. Also the following diseases—Diphtheria, Encephalitis Lethargica, Cerebro Spinal Fever and Anterior Poliomyelitis—necessitate several revisits to the home as the contacts are placed under supervision and spray treatment by the Home Nurses.

When a "First Case" of Measles is notified from certain Infant Departments of the Council Schools the whole of the class contacts are excluded from attendance from the ninth to the fifteenth day after onset of "First Case" and placed under the supervision of the Home Nurse who is responsible for watching and reporting any illness among the contacts during the period of exclusion.

Many abortive visits are paid to cases of Infectious Disease before the necessary particulars for the information of the Medical Officer of Health can be obtained.

FOOD POISONING.

During the year information was sent to this Department of six families who were alleged to be suffering from Food Poisoning. Full enquiries were made in each case, and samples of the food, &c., with particulars forwarded to the Ministry of Health; no fatality occurred.

MENTAL DEFICIENCY ACT, 1913.

The following gentlemen have been approved by the Local Authority for the purpose of giving certificates under the provisions of the above Act.

Dr. J. O. Symes, in all cases.

Dr. H. L. Ormerod, Westbury-on-Trym, in all cases of adults.

Dr. Newman Neild, all cases.

Dr. Askins for all cases under the age of 16 years.

In practice Dr. J. O. Symes certifies in all cases with an additional certificate from Dr. Ormerod or Dr. Newman Neild.

The Certified Institutions in and about Bristol are :—

Stoke Park, Stapleton	750	beds.
Royal Victoria Home, Horfield ...	42	,,
Beech House	90	,,
Heath House	88	,,
Hanham Hall	240	,,
Leigh Court	260	,,
Clevedon Hall, Clevedon	108	,,

The above are for all cases under the Act and are divided into beds for 768 males and 960 females, certified for 1,578.

Brentry Certified Institution, Westbury-on-Trym Males above the age of 18 years.	230	Beds.
Chasefield Laundry Home, 874 Fishponds Road Females, only adults.	41	,,
Southmead Institution, children only ...	100	,,
Stapleton Poor Law Institution, all classes ...	120	,,
Royal Fort Home, Bristol, approved Home, females	20	,,

The Local Control Authority is at present making arrangements for a Colony to provide between 500 to 600 beds at a site in Hortham Lane, Almondsbury. The site has been purchased, and plans are being prepared.

Supervising Officer, W. E. PRICE.

THE WEATHER OF 1924.

Local Observations.

January.—Apart from one or two days during the middle of the second week the weather throughout was of the usual character which has predominated during recent winter seasons, being almost continuously mild. This day or so, however, gave a touch of real old-fashioned winter such as has not been experienced in January for a number of years; rain, snow, intense frost and thick fog following each other in rapid succession from the 8th to the 10th.

The total rainfall of the month varied from 4.03 inches at Frampton Cotterell to 4.92 inches at Bishopston falling upon 18 and 22 days respectively. The heaviest fall in 24 hours occurred on the 18th, the amounts at the two stations being 0.54 inch and 0.78 inch. The fall shows an excess locally of 1½ inches.

The mean temperature exceeded the normal by two degrees, the figures being 40.8 degrees; this making the fourth successive warm January. The extremes recorded were 52.6 degrees on the 1st, and 14.6 degrees on the 10th. The warmest day proved the 13th, with a mean temperature of 47 degrees, and the coldest the 10th; mean 26.3 degrees. There were five frosty nights, whilst there was continuous frost throughout the day time of the 9th.

Mean atmospheric pressure at 9 a.m. was below the average, the figures being 29.928 inches. The extremes recorded were 30.619 inches on the 26th, and 29.189 inches on the 9th.

February.—The month commenced with just a week of beautifully fine mild weather. Then after one or two slight rainfalls the wind became easterly, and the temperature fell considerably. During the remainder of the month conditions were continuously cold and wintry and dry. Indeed, apart from one day, the 20th, frost was recorded daily from the 14th onward.

The total rainfall locally was 0.21 inch at Frampton Cotterell, and 0.36 inch at Bishopston, falling upon seven days; the heaviest fall recorded being 0.07 inch on the 24th. The month proved the driest locally since June, 1921, in which year February also was remarkably dry with only just over three-tenths of an inch of rain.

The mean temperature was 37.5 degrees—a value about 2½ below the normal, and six below that of the month in 1923. The extremes recorded were 52.6 degrees on the 6th, and 18.4 degrees on the 15th, while the warmest day was the 6th, with a mean temperature of 48.6 degrees, and the coldest the 15th, mean 28.8 degrees. There were 17 frosty nights.

Mean atmospheric pressure at 9 a.m. was 30.060 inches, a value well above the average. The extremes were 30.613 inches on the 17th, and 29.017 inches on the 9th.

March.—Following 16 consecutive frosty nights in the preceding month, March added a further 21 before the sequence

came to an end, only two of the 37 being a ground frost alone. The month was also remarkable for a spell of brilliant sunshine from the 9th to the 19th inclusive. With the 21st the weather became warm and spring-like, but by the close, cold wintry conditions had again become general.

The total rainfall locally varied from 1.27 inches at Frampton Cotterell to 1.76 inches at Bishopston, falling eleven and nine days respectively. The heaviest falls at the two stations were 0.39 inch on the 22nd, and 0.55 inch on the 3rd. The total shows a deficiency locally of just about an inch.

Mean temperature was 40.3 degrees, this being about two below the normal, the month being the coldest March since 1919, when the mean was 39.4 degrees. The extremes recorded were 60.5 degrees on the 12th, and 18.6 degrees on the 3rd. The warmest day was the 25th, with a mean of 52.2 degrees; and the coldest the 3rd, mean 28.9 degrees. There were 22 frosty nights.

Mean atmospheric pressure locally at 9 a.m. was below the average, the figures being 29.857 inches. The maximum reading recorded was 30.446 inches on the 7th, and the minimum 29.152 inches on the 2nd.

April.—The renewed series of night frosts which had set in at the close of March continued almost unbroken until well into the third week, there being only two nights up to and including the 18th entirely free from frost. Then, however, a period of brilliant sunshine set in, with a substantial rise of temperature, the weather throughout Easter-time being all that could be desired. The month closed with a week of daily rainfalls and rough unsettled weather.

The total rainfall at Frampton Cotterell was 2.42 inches, falling upon 12 days, and at Bishopston, 3.26 inches, with a similar number. The heaviest daily fall was 0.76 inch on the 13th. The falls show an excess locally of about three-quarters of an inch.

The mean temperature was 45.7 degrees, this showing a deficiency of two degrees. This was entirely due to the unusual cold prevailing throughout the first half of the month, the mean for this period being only 41.4 degrees—just half a degree above that of January. The extremes recorded were 71.2 degrees on the 21st, and 23.6 degrees on the 6th. The warmest day was the 22nd, mean 56.5 degrees, and the coldest the 4th, mean 37.1 degrees. There were 12 frosty nights.

Mean atmospheric pressure at 9 a.m. was 29.862 inches, these figures being decidedly deficient. The extremes recorded were 30.512 inches on the 20th, and 29.298 inches on the 14th.

May.—Doubtless this proved the most wet and stormy May of the present century. In 1903 there was quite as much rain, but in that year there occurred a very fine and sunny period from the 18th to the 26th, a feature which was entirely absent on this occasion. An outstanding feature, common to the month in each year, was the large number of thunder-

storms, and in this connection the month will be long remembered locally for the remarkable electrical discharge which was experienced over the centre of the City just after midday on the 3rd.

The total rainfall locally varied from 5.11 inches at Frampton Cotterell to 4.10 inches at Bishopston, falling upon 21 and 25 days respectively. The heaviest rainfall was 0.97 inch on the 31st. The excess was about two and a half inches.

The mean temperature was 53.5 degrees, a value very nearly the normal, and was once three above that of the month a year ago. The maximum recorded was 73.4 degrees and the minimum 34.4 degrees on the 17th. The warmest day was the 31st with a mean of 64.2 degrees, and the coldest the 5th, mean 44.9 degrees. One good feature was an entire absence of frosty nights.

Mean atmospheric pressure at 9 a.m. was 29.848 inches, these figures being much below the average. The extremes recorded were 30.258 inches on the 17th, and 29.364 inches on the 24th.

June.—The month opened with a series of heavy rainfalls, but at last with the 13th a real improvement in the weather set in, and although conditions never became quite settled, for the remainder of the month only three rainy days were recorded.

The total rainfall at Frampton Cotterell was 3.83 inches, and at Bishopston 3.79 inches; falling upon 13 and 18 days respectively. The heaviest fall at Frampton Cotterell was 0.79 inch, and at Bishopston 1.22 inches, both occurring on the 11th. The total for the month shows an excess locally of an inch and a quarter; this making an excess for the half year of just over three inches.

The mean temperature was 57.4 degrees—a value two below the average, but still one above that of the month in 1923. The extremes recorded were 77.5 degrees on the 17th and 35.7 degrees on the 14th. The warmest day was the 17th with a mean of 64.7 degrees, and the coldest the 3rd, mean 47.8 degrees.

Mean atmospheric pressure was a little below the normal, the figures for 9 a.m. being 29.997 inches. The maximum of 30.320 inches was recorded on the 25th, and the minimum of 29.435 inches on the 12th.

July.—Another month of heavy rains and low temperature, but with, fortunately, one period of warmth and sunshine during the second week. After the 14th, however, only upon two days did the temperature reach the average warmth for the time of year.

The total rainfall varied from 5.17 inches at Bristol to 4.15 inches at Frampton Cotterell, falling upon 18 and 16 days. At Bishopston over an inch within 24 hours was recorded upon two occasions, namely, 1.16 inches on the 17th, and 1.11 inches on the 27th. The fall shows an excess for the month locally of about two inches.

The mean temperature was 58.7 degrees, showing a deficiency of 3½ degrees, while these figures were no less than five below that of the month a year ago. The extremes recorded were 82.7 degrees on the 12th and 38.1 degrees on the 1st; while these days also showed the highest and lowest means, namely, 68.1 degrees and 52 degrees.

Mean atmospheric pressure was much below the normal, the value for 9 a.m. being 29.877 inches. The extremes recorded at this hour were 30.328 inches on the 14th, and 29.371 inches on the 3rd.

August.—A most deplorable month, the coldest and wettest of a very cold and wet summer, making the third August out of the last five with a very deficient temperature, and the second out of the last three with a heavy rainfall and very little sunshine. Fortunately, Bank Holiday week brought fine weather, but this is the only favourable comment possible for from the 11th onwards rain fell daily, while after the 12th, the 31st alone showed average warmth.

The total rainfall was 4.50 inches at Frampton Cotterell and 4.52 inches at Bristol falling upon 22 and 24 days respectively; these amounts showing an excess of about an inch. The heaviest falls within 24 hours were 1.50 inches at Frampton Cotterell on the 21st, and 0.97 inch at St. Andrew's Park on the 19th.

Mean temperature was 57.2 degrees, nearly four below the normal, the month showing a greater deficiency than any other of the year. The maximum recorded was 75.1 degrees on the 11th, and the minimum 40.3 degrees on the 9th. The warmest day was the 5th with a mean temperature 63.2 degrees, and the coldest the 24th, mean 53.5 degrees. Although so cold, however, the month was a degree warmer than in 1922.

Mean atmospheric pressure at 9 a.m. was 29.842 inches, and only twice during the present century has August possessed a lower mean, that is in 1912 and 1917. The extremes recorded were 30.428 inches on the 8th, and 29.315 inches on the 17th.

September.—Commencing with a rising barometer and a day of brilliant sunshine on the 2nd, the month seemed to promise that, as so often in the past, it would do much to make amends for the disappointing summer. This was not to be, however, for on the 4th rain again set in, and onward to the 27th, apart from the 18th, more or less was recorded daily.

The total fall locally varied from 3.59 inches at Bishopston to 3.27 inches at Frampton Cotterell, falling upon 24 and 23 days respectively. The heaviest amount within 24 hours was 0.56 inch, falling upon the 13th. The fall shows an excess locally of about three quarters of an inch.

The mean temperature was 56.4 degrees, a value slightly below normal. The extremes recorded were 71 degrees on the 6th, and 33 degrees on the 28th. The warmest day was the 13th with a mean of 62.3 degrees, and the coldest the 28th, mean 47.9 degrees. There were no frosty nights.

Mean atmospheric pressure at 9 a.m. was 29.829 inches, a value much below the average. The maximum reading occurred on the 3rd with 30.213 inches, and the minimum on the 9th, 29.399 inches.

October.—A somewhat remarkable month for while upon the whole it brought more pleasant weather than either of its two immediate predecessors, its all too few fine days were sandwiched in between periods of such heavy rainfalls that it easily proves the wettest month of a very wet year.

The total fall exceeds the average by 2½ inches, 6.45 inches being recorded at Bishopston and 5.67 inches at Frampton Cotterell; the rainy days numbering 20. The heaviest fall upon one day was 1.73 inches on the 7th. The month makes the seventh in succession with an excessive fall, while apart from February of last year it possesses the heaviest fall of any month since the record established by September in 1918.

The mean temperature was 50.8 degrees, this showing an excess; the month being the first since January with a temperature above the normal. The extremes recorded were 70.2 degrees on the 13th, and 28.4 degrees on the 24th; these dates also giving the highest and lowest means which were 60.6 degrees and 40.1 degrees respectively. There was one frosty night.

Atmospheric pressure was below normal, the mean locally at 9 a.m. being 29.904 inches. The highest reading was recorded on the 23rd, 30.458 inches; and the lowest, 29.459 inches on the 30th.

November.—This month in recent years has shown remarkable consistency in bringing us very little rainfall; in fact, the fall locally on this occasion is the heaviest for the month since that never-to-be-forgotten year 1914. Although this is the case, however, there has only been one occasion since then when there were so few wet days, this being in 1915, when the number was 10. Upon the whole, therefore, the month must be regarded as having been of a fairly pleasant and favourable character.

The rainfall locally did not differ materially from the average, the amount at Bishopston being 3.19 inches, and at Frampton Cotterell 2.74 inches; falling upon 13 days. The heaviest fall recorded was 0.95 inch at Bishopston and 0.81 inch at Frampton Cotterell on the 1st.

Mean temperature was nearly a degree above the normal, the value being 44.6 degrees; these figures being no less than 7½ degrees above that of the wintry November of 1923. The maximum for the month was 58.8 degrees on the 1st, and the minimum 21.3 degrees on the 18th, these dates also giving the highest and lowest means which were 52.6 degrees and 32 degrees respectively. There were four frosty nights.

Mean atmospheric pressure at 9 a.m. was 30.047 inches, a value considerably above the normal. The extremes recorded were 30.594 inches on the 19th, and 29.070 inches on the 27th.

December.—Although plenty of rain fell, there was for the time of year a good deal of very pleasant weather during the

first three weeks. Then, however, a steady deterioration set in, and although Christmas Day proved one of almost continuous sunshine, the last week of the year brought to our Islands the most stormy and inclement weather experienced throughout a most stormy and inclement year. The last day, indeed, provided a very fitting climax to so memorable a season with its remarkable succession of almost every variety of disagreeable weather possible.

The total rainfall exceeded the normal locally by two inches, the fall varying locally from 5.56 inches at Bishopston to 4.99 inches at Frampton Cotterell, falling upon 19 days. The heaviest daily falls at Bishopston was 0.85 inch on the 26th, and 0.94 inch at Frampton Cotterell on the 31st.

The mean temperature was 44.3 degrees, a value nearly five above the normal, it proving the warmest December since that of 1918, and the warmest winter month since January, 1921. The extremes of temperature recorded were 55 degrees on the 4th, and 30.7 degrees on the 11th, while the warmest day was the 15th with a mean temperature of 51.8 degrees, and the coldest the 11th, mean 35.1 degrees. There were five frosty nights.

Mean atmospheric pressure at 9 a.m. was 29.910 inches, a value somewhat above the normal. The extremes readings recorded were 30.452 inches on the 21st, and 29.162 inches on the 27th.

The observations relating to Bishopston are taken at St. Andrew's Park, and for them I am indebted to the courtesy of H. Vicars Webb, Esq.

The chief results for the year from observations taken locally at 9 a.m. (G.M.T.) were as follows :—

Mean atmospheric pressure (corrected)...	29.913 ins.
Greatest ,, ,, ...	30.619 ins. on Jan. 26th
Least ,, ,, ...	29.017 ins. on Feb. 9th
Total rainfall at Frampton Cotterell ...	42.19 ins.
Departure from average ...	+ 11.72 ins.
Number of rainy days ...	... 195
Heaviest fall in 24 hours ...	... 1.73 ins. on Oct. 7th
Total rainfall at Bishopston ...	... 46.67 ins.
Departure from average (Clifton)	+ 11.58 ins.
Number of rainy days ...	... 211
Heaviest fall in 24 hours ...	... 1.73 ins.on Oct. 7th
Mean temperature (max. and min.)	... 48.9 degs.
Departure from average ...	− 0.7 deg.
Maximum temperature ...	... 82.7 degs. on July 12th
Minimum temperature ...	... 14.6 degs. on Jan. 10th
Extreme range	... 68.1 degs.
Mean of warmest day ...	... 68.1 degs. on July 12th
Mean of coldest day	... 26.3 degs. on Jan. 10th
Hours of bright sunshine (estimated)	... 1,368½
Days of bright sunshine ...	... 86
Days entirely overcast ...	... 69
Number of frosty nights ...	... 66

H. H. HARDING, F.R. Met. Soc.

CAUSES OF SICKNESS.

Small Pox.

One case of Smallpox ("Port" introduction) was reported during the year—no extension followed. The previous introduction, limited to 7 cases, occurred in December—January 1920-21, and involved dislocation of the Sanatorium work at Novers Hill.

In 1903, under similar conditions, it was introduced into Bristol on 15 separate occasions, but was in no instance allowed to assume epidemic proportions.

During the last 41 years there have been 102 introductions of Smallpox into the City (23 of these were through the Port). (See Table).

The total number of known cases arising out of these introductions was 1236, and 126 deaths occurred.

This gives an average of 12 cases per introduction over the whole period.

Table showing Introductions of Smallpox since 1884.

Year	Total Cases	Total Deaths	Port Introductions	Total Introductions	Remarks
1884	7	—	—	3	
1885	33	10	4	13	
1886	85	8	1	6	
1887	163	13	—	4	
1888	224	26	1	2	
1889	1	—	—	1	
*1890	1	—	1	1	
1891	16	—	1	2	
1892	—	—	—	—	
1893	165	20	1	7	Continuation of 1893 Epidemic
1894	201	16	—	5	11 tramp introductions.
1895	4	—	—	1	
1896	42	5	—	3	
1897	10	1	1	2	
1898	2	—	1	2	
1899	—	—	—	—	
1900	—	—	—	—	
1901	1	—	1	1	
1902	4	2	3	3	
1903	46	3	1	15	
1904	34	1	—	6	
1905	13	—	—	5	
1906	32	—	—	4	
1907	6	1	1	4	
1908	1	—	—	1	
1909	39	9	—	3	
1910	4	—	1	2	
1911	—	—	—	—	
1912	62	3	2	2	
1913	—	—	—	—	
1914	—	—	—	—	
1915	32	7	1	2	
1916	—	—	—	—	
1917	—	—	—	—	
1918	—	—	—	—	
1919	—	—	—	—	
1920	—	—	—	—	
1921	7	1	?1	1	
1922	—	—	—	—	
1923	—	—	—	—	
1924	1	—	1	1	
Totals ...	1236	126	23	102	

* Compulsory Notification began.

It will be noted that since Notification attained full working efficiency, the limitation of introduced outbreaks has been very successful. Thus of the 15 introductions in 1903, 10 were limited to the original infected houses; and since 1895 these and 57 introductions only produced an average of 5 resultant cases each.

Scarlet Fever.

The notifications and deaths by quarters numbered :—

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
Notifications ...	238	151	132	310	831
Deaths ...	4	1	—	3	8

The disease was of a mild type, but if unsuitably circumstanced cases are not removed to hospital, home-overcrowding and consequent spread may result in development of septic complications and heightened mortality.

SCARLET FEVER.

	1	2	3	4	5
Year	Cases Notified	Attacks per 100,000 Living	Deaths	Deaths per 100,000 Living	Case Mortality per cent.
1890	559‡	253	40	18	7.1
1891	888	400	37	17	4.1
1892	1,442	644	47	21	3.2
1893	1,245	553	35	16	2.8
1894	485	214	16	7	3.2
1895	562	252	16	7	2.8
1896	1,352	586	59	24	4.3
1897	511	220	18	7	3.5
1898*	382	120	14	4	3.6
1899	697	217	13	4	1.8
1900	1,971	606	39	12	1.9
1901	2,206	670	36	10	1.6
1902	2,724	793	66	19	2.4
1903	2,168	639	49	14	2.2
1904‖	1,258	366	36	10	2.8
1905	1,085	302	39	10	3.5
1906	1,019	280	27	7	2.6
1907	886	240	26	7	2.6
1908	486	127	10	2	2.0
1909	692	183	12	3	1.7
1910	1,216	317	12	3	0.9
1911	953	266	16	4	1.6
1912	580	161	12	3	2.0
1913	1,738	471	6	1	0.3
1914	2,281	611	22	6	0.9
1915	1,069	302	18	5	1.7
1916	627	182	10	2	1.5
1917	257	76	3	1.3	1.1
1918	278	82	6	1.7	2.1
1919	363	100	2	0.5	0.5
1920	1,411	375	9	2.3	0.6
1921	1,576	412	7	1.8	0.4
1922	1,852	482	18	4.6	0.9
1923	1,444	374	19	4.9	1.3
1924	831	215	8	2	0.9

* City Extended. ‖ The City was further Extended in 1904.

‡ Notification commenced on February 12th, 1890, so that the case mortality for this year is probably overstated.

Diphtheria.

The notifications and deaths for the year were :—

		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
1924	Cases	235	159	122	463	979
	Deaths	24	9	5	25	63
compared with						
1923	Cases	218	115	121	283	737
	Deaths	11	6	7	25	49
1922	Cases	391	179	137	179	886
	Deaths	31	16	15	12	74

In 1902, the deaths from diphtheria numbered 189.

Arrangements are made for protection of the hospital staff, as authorised by the Committee (Schick method).*

* Early in 1922 the whole of the Ham Green Nursing and Domestic Staff (135) were tested, and the positives (33) duly protected with T.A.T. Each new entrant is similarly protected before undertaking the nursing of Diphtheria cases.

Diphtheria (including Membranous Croup).

Year	Cases Notified	Attacks per 100,000 Living	Deaths	Deaths per 100,000 Living	Case Mortality per cent.
1890	56‡	25	16	7	28.5
1891	70	31	16	7	22.8
1892	106	47	38	16	35.8
1893	141	59	53	23	37.5
1894	128	56	50	22	39.0
1895	165	69	34	14	20.6
1896	258	111	38	16	14.7
1897	205	88	36	15	24.7
1898*	217	68	44	13	20.2
1899	215	67	33	10	15.3
1900	512	157	103	31	21.1
1901	908	275	124	37	13.6
1902	1,109	325	189	54	17.0
1903	1,134	331	119	35	10.4
1904‖	1,051	305	105	30	9.9
1905	1,021	284	59	16	5.7
1906	839	231	82	22	9.7
1907	926	251	68	18	7.3
1908	924	243	69	18	7.4
1909	712	188	55	14	7.7
1910	556	145	38	9	6.8
1911	584	163	42	11	7.1
1912	643	178	48	13	7.4
1913	762	206	33	8	4.3
1914	633	174	39	10	6.1
1915	505	143	36	10	7.1
1916	406	118	30	8	7.3
1917	376	112	27	12	7.1
1918	420	124	36	10	8.5
1919	448	124	27	7	6.0
1920	965	256	78	20	8.0
1921	1,426	373	107	28	7.5
1922	886	230	74	19	8.3
1923	737	191	49	12	6.6
1924	979	253	63	16	6.4

‡ Notification commenced February 12th, 1890.
* Enlarged City. ‖ City again extended in 1904.

Antitoxin came into use about the year 1895, and was in general use early in the present century.

From 27th October, 1924, " P " Block at Ham Green (26 beds ordinarily used for Acute Female Phthisis cases) has been utilised for nursing Diphtheria patients.

Enteric Fever.

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
Notifications	6	11	15	10	42
Deaths ...	—	2	2	—	4

This disease, one of the few dependent directly on "insanitary" conditions, is practically under control.

ENTERIC FEVER (including Paratyphoid).

	1	2	3	4	5
Year	Cases Notified	Attacks per 100,000 Living	Deaths	Deaths per 100,000 Living	Case Mortality per cent.
1890‡	122	55	33	14	27.0
1891	116	52	23	10	19.6
1892	135	60	18	8	13.3
1893	122	54	26	11	21.3
1894	90	39	21	10	23.3
1895	89	59	22	9	24.7
1896	110	47	20	8	18.1
1897	343	147†	47	20	17.4
1898*	113	35	26	8	23
1899	219	68	35	10	16
1900	293	90	44	13	15
1901	281	85	40	12	14
1902	319	93	58	17	18
1903	134	39	21	6	15
1904§	172	50	26	7	15
1905	76	21	13	3	17
1906	120	33	21	5	17
1907	74	20	15	4	20
1908	103	27	10	2	9
1909	66	17	12	3	18
1910	85	22	9	2	10
1911‖	148	41	18	5	12
1912	79	21	7	1	8
1913	64	17	5	1	7
1914	98	27	9	2	9
1915	45	12	13	3	28.8
1916	17	4	2	0.5	11.7
1917	52	15	4	1.7	7.6
1918	69	20	8	2.3	11.5
1919	33	9	6	1.6	18.1
1920	48	12	4	1.0	8.3
1921	35	9	2	0.5	5.7
1922	31	8	1	0.2	3.2
1923	32	8	5	1.2	15.6
1924	42	10	4	1	9.5

* Extended City. † Milk Outbreak introduced from the County.

‡ Notification commenced February 12th, 1890, so that the case mortality for this year is probably overstated.

§ City again extended in 1904. ‖ Localised Outbreak in St. James.

Encephalitis Lethargica.

This newly-recognised disease was much in evidence in Bristol during 1919-20-21, when the Ministry instructed a special inquiry into its prevalence.* It continued in some excess over the first quarter of 1921 (45 cases—12 deaths), and thereafter subsided, to re-appear in excess in the second quarter of 1924.

1924	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
Cases ...	5	120	15	22	162
Deaths ...	2	16	3	5	26

During 1924 an enquiry was instituted into the serious late manifestations apt to follow this disease. The investigation was carried out for this Department by Dr. Dorothy Staley :—

* Reports on Public Health and Medical subjects.
No. 11. Encephalitis Lethargica—Dr. Allan C. Parsons
Ministry of Health, 1922. 10/- net.

Late Manifestations of Encephalitis Lethargica.

Survey of 76 patients whose illness commenced during the years 1919 to 1923.

Of 76 cases four could not be traced, four had died in the interval (of only two of whom reliable details could be found), and 26 had completely recovered . 44 showed late manifestations, many presenting a multiplicity of nerve lesions.

The following is a summary of the results found in the investigation :

Completely recovered	26 ...	37.1%
Total inability to work	6 ...	8.6%
Partial inability to work	15 ...	21.4%
Apathy, Dullness, Drowsiness, Defective memory	17 ...	24.3%
Dementia	2 ...	2.9%
Viciousness	2 ...	2.9%
Irritability, loss of will power, and other alterations of mentality	18 ...	25.7%
Inversion of Diurnal Rhythm... ...	1 ...	1.4%
Squint	4 ...	5.7%
Ptosis	2 ...	2.9%
Nystagmus	3 ...	4.3%
Pupils—defective reaction on convergence, irregularity	7 ...	10.0%
Diplopia	5 ...	7.1%
Paresis—Facial	11 ...	15.7%
,, —Eyelids	3 ...	4.3%
,, —Arm and hand	8 ...	11.4%
,, —Leg	13 ...	18.6%
Tremor—Tongue and lips	5 ...	7.1%
,, —Arm and hand	10 ...	14.3%
,, —Leg	4 ...	5.7%
Speech—Stammering and slurring ...	7 ...	10.0%

Parkinsonism	8 ...	11.4%
Choreiform movements	2 ...	2.9%
Involuntary movements—abdomen, hands or arms	5 ...	7.1%
Constipation	6 ...	8.6%
Thirst	5 ...	7.1%
Hyperidrosis	4 ...	5.7%
Excessive Salivation	5 ...	7.1%
Spasmodic cough	1 ...	1.4%
Dysphagia	1 ...	1.4%
Severe headache	2 ...	2.9%
Jacksonian Epilepsy	1 ...	1.4%
Incontinence of urine or fæces (partial or complete)	4 ...	5.7%
Abnormal Obesity	3 ...	4.3%

In addition to the above, several patients complained that their sight had not been so good since their illness. As, however these were people of middle age, this was not included amongst the results of the disease.

A number of the patients were in a very grave condition, and in few was there any appearance of improvement taking place at present. Each patient was carefully examined by Dr. Staley, and, where necessary, statements were verified by reference to hospital records, etc.

D. S. DAVIES, M.D.,
Medical Officer of Health.

Malaria.

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
Notifications	7	2	6	4	19
Deaths ...	1	—	—	—	1

As the anopheles mosquito, the "porter" of malaria, is not extinct in England, the Ministry is keeping a constant watch against the introduction of virulent types of malaria from abroad.

Influenzal Pneumonia and Acute Primary Pneumonia.

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
Notifications ...	315	82	30	107	534

These diseases are personal and most readily acquired in crowded assemblies.

Measles.

Deaths :—

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
13	1	1	—	15

During the year, 156 cases of children over 5 years of age were reported from the Public Elementary Schools. All these were visited by the Home Nurses and precautions advised.

The last prevalence of measles was in the first and second quarters of 1918, when 207 deaths occurred, and, as this disease recurs with fair regularity every 3 or 4 years, it is over due ; available Hospital provision for urgent cases will save life.*

The disease was notifiable from 1915 to the end of 1919, when notification was discontinued, so that we must again rely upon information from medical practitioners, home nurses and others as to cases urgently requiring attention, preferably to be given in hospital when hospital room becomes available.

Whooping Cough.

Deaths :—

1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
2	2	—	4	8

57 cases of children of school age were reported from the Public Elementary Schools, and the homes were visited by the Home Nurses.

Chickenpox and Mumps.

343 cases of Chicken-pox and 655 cases of Mumps occurring amongst school children were also reported and the homes visited by the Home Nurses.

Infantile Diarrhœa.

The small number of deaths from this disease through the summer is again noteworthy, and in large part accounts for the very low infant mortality. As a rule, extreme heat in the late summer and early autumn is accompanied by a considerable diarrhœal mortality ; the summer was not marked by extreme heat, and was fairly wet.

Deaths under 2 years of age :—

	1911	1913	1921	1922	1923	1924
August ...	194	40	16	6	7	3
September ...	124	48	14	12	14	5
	318	88	30	18	21	8

As shown in detail in the Report for 1922, it is the prolongation of the summer heat wave into the late summer and early autumn that is accompanied by excess of Infant Mortality from Diarrhœa.

These indications were notably present in 1911, whilst in 1921 the extremely hot weather of July was not continued through August, and in 1922, though June was a hot month to begin with, it soon became cooler ; and the weather was inclement, cold and wet, through August ; September, though dry, showed a low temperature.

* The overdue epidemic of Measles appeared in February, 1925.

Bronchitis and Pneumonia.

These diseases amongst children under one year of age assist materially in raising the infant mortality rate, when inclement weather conditions prevail during the two winter quarters. A concurrent cold spring and hot August–September will thus bring about a high infant mortality rate ; the main factor is, however, summer diarrhœa. The average number of deaths in the two winter quarters for 15 years past is 90.7. More than 100 deaths were registered from bronchitis and pneumonia in infants in 1907-8, 1908-9, 1911-12, 1914-15, 1916-17 and 1918-19.

The effect of fatal intercurrent epidemics, such as measles must also be taken into account as adding to the infant mortality.

Percentage to total deaths of infants under one year, 1905-1924.

	Bronchitis, Pneumonia & other Diseases Respiratory Organs	Diarrhœa and Enteritis	Measles	Whooping Cough
1905	18.8	11.0	2.4	4.4
1906	14.6	14.8	2.5	4.3
1907	16.4	11.5	0.6	1.8
1908	21.5	13.3	1.9	5.8
1909	13.8	13.9	3.1	3.4
1910	16.3	11.1	1.3	4.8
1911	12.3	28.3	2.3	5.7
1912	25.0	7.0	4.2	3.3
1913	13.3	18.4	1.2	2.7
1914	16.6	14.7	1.1	3.5
1915	18.2	15.6	1.7	6.4
1916	15.8	13.7	3.0	1.4
1917	26.3	9.6	—	2.6
1918	16.7	12.0	5.2	3.3
1919	18.2	7.7	—	3.8
1920	20.4	10.1	3.5	1.0
1921	15.0	15.0	0.5	4.4
1922	22.2	8.2	1.7	2.1
1923	16.5	11.8	0.4	6.6
1924	25.7	7.1	0.5	0.9

Birth-rate, Death-rate, and Analysis of Mortality during the Year 1924.

(*Provisional figures. The rates for England and Wales have been calculated on a population estimated to the middle of* 1924, *while those for the towns have been calculated on populations estimated to the middle of* 1923. *The mortality rates refer to the whole population as regards England and Wales, but only to civilians as regards London and the groups of towns.*)

	Birth-rate per 1,000 Total Population	Annual Death-rate per 1000 living.									Rate per 1,000 Births.		Percentage of Total Deaths.		
		All Causes.	Enteric Fever.	Small-pox	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Influenza.	Violence.	Diarrhœa and Enteritis (under 2 years).	Total Deaths under One Year.	Causes of Death certified by Registered Medical Practitioners.	Inquest Cases.	Uncertified Causes of Death.
England and Wales ...	18.8	12.2	0.01	0.00	0.12	0.02	0.10	0.06	0.49	0.44	7.3	75	92.3	6.6	1.1
105 County Boroughs and Great Towns, including London	19.4	12.3	0.01	0.00	0.18	0.03	0.12	0.08	0.45	0.40	9.2	80	92.5	6.9	0.6
157 Smaller Towns (1921 Adjusted Populations 20,000—50,000) ...	18.9	11.2	0.01	0.00	0.08	0.02	0.09	0.06	0.50	0.36	6.2	71	93.3	5.5	1.2
London	18.7	12.1	0.01	—	0.29	0.03	0.11	0.12	0.36	0.44	8.4	69	91.3	8.6	0.1

CITY OF BRISTOL. Cases of Infectious Disease and Tuberculosis notified during the Year 1924.

Notifiable Diseases.	Cases Notified in Whole District.								Total Cases Notified in each Locality.										No. of Cases Removed to Hospitals and Sanatoria from each Locality.									
	At all Ages	At Ages—Years.							Ashley	Bedminster	Bristol Central	Clifton	Knowle	St. George	St. Philip	Stapleton	Westbury-on-Trym	Public Insts.	Not belonging to Borough	Ashley	Bedminster	Bristol Central	Clifton	Knowle	St. George	St. Philip	Stapleton	Westbury-on-Trym	Public Insts.	Not belonging to Borough
		Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65	65 and upwards																					
Small-pox (Port)	1					1													1										1
Cholera																													
Plague																													
Diphtheria (including Membranous Croup)	979	17	276	532	80	63	10	1	33	318	116	108	33	119	155	27	13	54	3	21	295	109	93	23	108	145	22	10	54	5
Erysipelas	180	3	3	18	27	41	69	19	20	37	20	10	12	30	31	1	6	12	1	1	4	11		3	4	9	1		12	1
Scarlet Fever	831	6	196	495	103	29	2		73	167	78	119	23	122	163	44	23	15	4	36	109	65	75	14	51	107	18	13	15	4
Typhus Fever																													
Enteric Fever	42		6	10	12	11	2	1	3	8	1	11	6	3	3	1	3	3		2	6	1	5	4	2	3	1		3	
Relapsing Fever																													
Continued Fever																													
Puerperal Fever	43				19	24			1	7	5	1	1	1	6	1	1	17	2	1	6	3		1		3	1		17	2
Cerebro-Spinal Meningitis	3	2			1					1		1			1						1					1			
Poliomyelitis	9	1	3	3	2						1	3		1	2		1		1						1		1			1
Acute Primary Pneumonia	249	10	45	43	35	59	41	16	29	49	22	39	12	39	34	10	7	6	2	2	9	13	18	2	8	15		4	5	2
Acute Influenzal Pneumonia	285	3	20	25	29	82	76	50	34	50	25	22	12	35	41	10	17	37	2	2	11	13	7		6	16	3	5	37	2
Malaria	19				7	9	3		6	1	1	1		2		1	1		6			1								6
Dysentery	32	1		2	3	13	10	3		2	1				2			25	2		1	1			2			25	1
Trench Fever																						1							
Acute Encephalitis Lethargica	162	1	6	47	38	46	23	1	13	32	14	5	4	32	40	8	6	2	6	2	20	12	3	2	20	24	6	1	2	6
Acute Polio Encephalitis	2			1	1				1							1										1				
Ophthalmia Neonatorum	89	89							2	11	26	10	4	12	14	5	4	1												
Pulmonary Tuberculosis	799	4	13	91	178	361	138	14	85	118	101	88	48	137	140	54	23	3	2											
Tuberculous Meningitis	31	7	15	7	1	1			3	5	2	4	1	5	8	3														
Tuberculosis of Peritoneum and Intestines	50	2	12	21	8	4	1	2	7	4	4	11	2	5	13	3														
Tuberculosis of Spinal Column	14		4	3	6	1				4	2	1		4	1	1														
Tuberculosis of Joints	39	1	6	15	6	9		2	3	6	6	4		5	9	5														
Tuberculosis of other Organs	69	4	10	24	15	10	5	1	9	5	10	6	5	11	16	4	3													
Totals *	3928	151	615	1336	571	765	380	110	322	825	435	444	163	563	679	179	111	174	33	67	462	229	201	49	200	326	53	34	170	31

	M.	F.												
Births	3627	3471	573	1064	1631	775	272	1060	984	395	344			
Stillbirths	121	116	14	31	87	16	2	46	27	5	9			
Totals	3748	3587	587	1095	1718	791	274	1106	1011	400	353			
	7335													

* Includes 14 Port cases – 1 Smallpox, 2 Scarlet Fever, 1 Acute Influenzal Pneumonia, 6 Malaria, 2 Dysentery, and 2 Pulmonary Tuberculosis.

CITY OF BRISTOL.

Causes of, and Ages at, Death during the Year 1924.

Cause of Death.	Deaths in Whole District at Subjoined Ages.									Deaths in Localities (at all Ages).											Deaths in Public Institutions.
	All Ages	Under 1	1 & under 2	2 & under 5	5 & under 15	15 & under 25	25 & under 45	45 & under 65	65 & upwards	Ashley	Bedminster	Bristol Central	Clifton	Knowle	St. George	St. Philip	Stapleton	Westbury-on-Trym	Mun. Institution. (Home Add. unknown)	Not belonging to Borough	
1 ENTERIC FEVER	4	...	.	...	..	1	2	1	..	...	1	...	..	...	1	...	...	...	...	2	3
2 SMALLPOX	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	.
3 MEASLES	15	3	9	2	1	...	...	...	...	...	2	...	...	...	8	3	..	1	...	...	1
4 SCARLET FEVER	8	...	2	3	2	1	...	...	...	...	2	...	...	1	8	3	..	1	...	...	4
5 WHOOPING COUGH	8	5	1	1	1	...	...	...	...	1	2	...	2	...	2	1	..	...	...	...	...
6 DIPHTHERIA and CROUP	63	3	2	34	24	...	...	...	...	...	5	...	...	..	2	...	1	..	...	...	2
7 Influenza	210	5	1	3	4	6	30	64	97	.	26	6	6	.	12	10	1	..	.	2	56
8 Erysipelas	13	2	..	...	2	1	2	5	1	43	37	17	26	18	21	24	11	10	1	2	44
9 Phthisis (Pulmonary Tuberculosis)	364	4	1	4	13	75	152	102	13	1	2	..		2	3	4	..	..	..	1	7
10 Tuberculous Meningitis	32	8	9	6	7		2	..	..	36	41	46	50	14	65	70	20	10	1	11	153
11 Other Tuberculous Diseases	51	7	2	5	10	10	9	6	2	3	5	2	2	1	3	9	3	...	...	4	23
12 Cancer, malignant disease	519	...	1	2	2	4	48	233	227	10	5	6	6	4	1	6	..	2	..	11	24
13 Rheumatic Fever	26	...	..	2	9	5	1	3	6	81	75	65	53	32	68	64	31	13	3	34	109
14 Meningitis	23	6	2	2	3	4	1	1	4	2	6	1	1	...	10	1	2	2	...	1	5
15 Organic Heart Disease	543	1	...	..	6	10	41	132	333	3	4	3	2	...	3	3	1		...	4	14
16 Bronchitis	398	36	5	3	2	2	20	55	275	88	70	68	75	30	71	51	53	26	2	9	92
17 Pneumonia (all forms)	412	97	47	33	10	12	56	67	90	48	72	55	28	23	77	56	24	8	1	6	61
18 Other Diseases Respiratory Organs	64	...	...	2	2	4	9	23	22	45	69	60	33	14	70	75	13	15	...	17	164
19 DIARRHŒA and ENTERITIS	43	37	6	..						8	10	6	9	4	8	10	6	1	...	2	13
20 Appendicitis and Typhilitis	28	...	1	1	5	4	6	9	2	5	3	5	5	...	10	9	4	..	..	2	23
21 Cirrhosis of Liver	17	...	...	...	...	..	2	11	4	1	4	6	2	2	5	2	...	1	..	5	22
21a Alcoholism	2	...	..	...	..	..	1	..	1	3	5	2	2	1	2	2	..	...	...	...	7
22 Nephritis and Bright's Disease	170	...	2	2	8	7	21	63	67	...	1		1	...			..	..	..	..	1
23 Puerperal Fever	13	...	...	..		4	9	...	...	23	31	12	17	12	22	23	6	4	2	15	71
24 Other Accidents and Diseases of Pregnancy and Parturition	20	...	..	...	...	3	16	1	..	..	1	2	...	1	1	4	1	1	...	2	12
25 Congenital Debility and Malformation, including Premature Birth	205	205	...	...	..	...	...	..	..	2	3	2	2	...	2	5	...	...	...	4	11
26 Violent Deaths	153	8	4	5	16	13	22	36	49	16	37	23	22	9	33	33	11	4	...	9	81
27 Suicide	21	..					9	8	4	14	24	20	14	7	18	17	10	5	...	24	80
28 Other Defined Diseases	1519	90	13	14	37	36	127	355	847	5	2	2	1		4	3	1	1	...	2	7
29 Diseases ill-defined or Unknown	1		1	...	...					196	216	166	211	70	232	190	90	40	12	96	613
All Causes	4945	517	109	124	164	202	586	1179	2064	635	759	575	570	245	758	683	289	144	22	265	1763
Sub-Entries included in above figures: 14a Cerebro-Spinal Meningitis	2	2	...	..	...	...	...	...	...	...	1	..	...	...	...	1	.	..	...	..	2
28a Encephalitis Lethargica	26	..	...	...	7	3	9	6	1	3	10	1	..	...	5	5	1	...	...	1	22
Venereal Diseases	11	9	..	...	...	...	1	1	...	...	1	2	3	...	3	2	...	...	...	...	6
Malaria	1	..	..	...	...	...	..	1	.	...	...	...	1	...	..	..	..	.	.	...	..
Dysentery	13	1	...	...	...	...	4	6	2	...	2	...	...	...	...	1	..	...	8	2	10
Acute Polio Encephalitis	1	...	...	...	...	...	1	...	...	1	...	...	..			...	...	...	...	...	...
Deaths of Infants under 1	44	86	71	47	24	93	95	27	11	1	18	...									
Number of Births	M. 313 F. 275	M. 554 F. 523	M. 811 F. 813	M. 428 F. 378	M. 123 F. 144	M. 575 F. 512	M. 490 F. 516	M. 225 F. 180	M. 139 F. 139	M. 38 F. 36	...	...									
	588	1077	1624	806	267	1087	1006	405	278	74	...	...									

CITY RATES.

No. of Births.	Birth Rate.	Death Rate. This Year.	Death Rate. Last Year.	Death Rate. 10 Years' Average	Principal Epidemic Diseases (Zymotic Rate	Infantile Rate
M. 3696 F. 3516 — 7212	18·67	12·80	11·72	13·73	0·36	71·68

Average age at Death of persons aged 65 and upwards ..75 years 10 months.
Births of Illegitimate Children . (Males 136 Females 130)—266
Total Deaths " " under 5 (" 15 " 13)— 28
Inquests ... " " ... ... " 407

CITY OF BRISTOL.

INFANT MORTALITY during the Year 1924.

Deaths from stated Causes in Weeks and Months under One Year of Age.

CAUSE OF DEATH	Under 1 Week	1-2 Weeks	2-3 Weeks	3-4 Weeks	Total Under One Month	1-2 Months	2-3 Months	3-4 Months	4-5 Months	5-6 Months	6-7 Months	7-8 Months	8-9 Months	9-10 Months	10-11 Months	11-12 Months	Total Deaths Under One Year
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chicken-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	3
Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Whooping Cough	...	...	...	...	...	1	...	...	...	...	1	...	...	2	...	1	5
Diphtheria and Croup ...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	3
Erysipelas	...	...	1	...	1	1	...	...	...	...	...	...	...	...	...	...	2
Tuberculous Meningitis ...	...	...	...	...	...	...	...	...	...	2	...	1	2	2	1	...	8
Abdominal Tuberculosis ...	...	...	...	...	...	...	...	...	1	...	...	1	...	1	...	...	3
Other Tuberculous Diseases	...	...	...	...	...	...	1	...	...	...	2	...	3	2	...	...	8
Meningitis (not Tuberculous)	...	...	1	...	1	...	2	...	...	1	...	...	2	...	...	...	6
Convulsions		1	1	...	2	...	3	1	1	...	...	...	1	...	1	...	9
Laryngitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bronchitis	...	...	4	3	7	13	1	1	6	...	1	...	1	1	4	1	36
Pneumonia (all forms) ...	2	1	4	4	11	10	7	7	6	9	7	4	11	13	3	9	97
Influenza	...	...	1	...	1	...	...	1	1	...	...	1	1	...	...	...	5
Diarrhœa	...	...	1	...	1	1	1	...	1	...	2	...	...	1	...	...	7
Enteritis		5	2	3	10	4	3	3	5	2	1	...	...	...	2	...	30
Gastritis	...	...	2	1	3	...	2	1	...	...	...	...	...	...	1	...	7
Syphilis	2	2	1	2	7	1	...	...	...	...	1	...	...	...	...	...	9
Rickets	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Suffocation, overlying ...	1	...	1	...	2	...	1	...	...	...	...	...	1	1	...	...	5
Injury at Birth	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Atelectasis	17	2	2	2	23	...	1	1	...	...	...	...	...	...	...	...	25
Congenital Malformations ...	16	5	1	3	25	4	5	2	2	...	1	...	2	...	...	1	42
Premature Birth	78	7	9	2	96	6	2	...	...	...	...	...	...	...	...	...	104
Atrophy, Debility & Marasmus	14	6	7	7	34	7	6	5	3	1	1	...	...	1	...	1	59
Other Causes	12	6	2	...	20	4	...	3	2	3	2	2	2	3	1	2	44
Totals ...	142	35	40	27	244	52	35	25	28	18	19	10	26	28	15	17	517

		M.	F.
Net Births during the Year	Legitimate	3560	3387
	Illegitimate	136	129

		M.	F.
Net deaths during the Year	Legitimate Infants	298	193
	Illegitimate Infants	15	11

TUBERCULOSIS.

Sanatorium Benefit (1924).

At the end of the war the Council had provided 50 beds at Winsley for early cases of pulmonary phthisis and 52 beds at Ham Green ; also Hospital provision for late cases, 20 beds at Ham Green and 21 beds at Clift House. During the past year the Committee again took up the question of non-pulmonary tuberculosis and surgical tuberculosis, delayed by the war. At Novers Hill, 36 cases of early tuberculosis conditions in children were admitted until November, 1920, when they were transferred to Snowden House, where 18 children were temporarily accommodated until October, 1921, on which date the Institution was closed and the patients transferred to Frenchay Park Sanatorium.

Clift House Hospital, accommodating 21 advanced cases, was closed in September, 1921, and the patients transferred to Ham Green Sanatorium, where the 52 additional beds for advanced cases were in occupation until November, when 26 were taken over for acute Diphtheria cases to supplement the insufficient accommodation at the Fever Hospital, and the remaining 26 beds were also required for Diphtheria in January, 1922.

In November, 1922, to meet the pressure of Scarlet Fever, it became necessary to take over one Female Block of 26 beds at Ham Green, and this Block did not become available for Phthisis until August, 1923.

At the end of December, 1922, admissions to Frenchay Park were stopped owing to a minor outbreak of Scarlet Fever at that Institution, and early in 1923 Chicken Pox also contributed to the " hold-up " of admissions, the embargo being removed at the end of February.

During the year 1923 the Committee completed arrangements with the United Services Fund for the admission to Heatherwood Hospital, Ascot, of children of ex-Soldiers and Airmen, up to 12 years of age, suffering from Surgical Tuberculosis, the first case being admitted on 1st May. The maintenance charge is 25/- per week.

In April, 1923, Mr. Hubert Chitty, F.R.C.S., was appointed as Consulting Surgeon (part time) under the City Council's Tuberculosis Scheme.

In October, 1924, the Phthisis accommodation at Ham Green Sanatorium was reduced to the extent of one Female Block (Acute) of 26 beds, this building being given over to the nursing of Diphtheria, and is still (May) in use for that purpose.

BRISTOL MUNICIPAL TUBERCULOSIS DISPENSARIES.

19 Portland Square.
4 Redcliffe Parade West.

1924.

Total patients treated, 3,836.
Total Attendances, 19,494
Total number of re-examinations, 2,582.

New Cases Examincd—

Pulmonary Tuberculosis	548	(308	Insured,	240	Non-insured)	
Stigmata and other forms of Tuberculosis	250	(19	,,	231	,,	)
Observation at Dispen-Dispensary ...	184	(98	,,	86	,,	)
Non-Tuberculous ...	412	(96	,,	316	,,	)
Total ...	1,394	(521	,,	873	,,	)

Total attendances of School Children	6,414
X-Ray examinations	620
Sputum examinations	1163
Total injections	1,572
Artificial Pneumothorax	15
No. of visits (domiciliary) by Tuberculosis Officers ...	753
No. of visits to Patients by Tuberculosis Nurses ...	7,789
No. of cases seen by Consulting Surgeon	117
No. of attendances of Cases seen by Consulting Surgeon	189

C. J. CAMPBELL FAILL, F.R.C.P., Ed.,
Tuberculosis Officer.

L. HEARN, M.B., B.S., Durh.,
Assistant Tuberculosis Officer.

Cases notified or coming to the knowledge of the Medical Officer of Health.

Age Periods ...	0—1	1—5	5—10	10—15	15—20	20—25	25—35	35—45	45—55	55—65	65 & up.	Total
Pulmonary. Males ...	1	8	21	21	38	33	100	75	57	36	9	399
Pulmonary. Females ...	3	5	18	31	44	63	123	63	32	13	5	400
Total Pulmonary Cases	4	13	39	52	82	96	223	138	89	49	14	799
Non-Pulmonary. Males	10	32	23	16	9	3	9	3	1	1	—	107
Non-Pulmonary. Females	4	15	19	12	14	10	6	7	3	1	5	96
Total Non-PulmonaryCases	14	47	42	28	23	13	15	10	4	2	5	203
Total Pulmonary and Non-Pulmonary Cases ...	18	60	81	80	105	109	238	148	93	51	19	1002

Sanatoria available for In-Patient Treatment, 1924.

		ADMITTED.			DISCHARGED.			DIED.			TRANSFERRED.		
	No. of Beds.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
EARLY CASES.													
Winsley Sanatorium, nr. Bath. (Beds retained by payment to Winsley Board of Management) ...	58	107	74	181	95	68	163	1	—	1	4	—	4
Ham Green Sanatorium, Pill, near Bristol (On adjacent site to Isolation Hospital)	52	96	85	181									
ADVANCED CASES.													
Ham Green Tuberculosis Hospital (On adjacent site at Ham Green)	72	98	65	163	146	145	291	46	23	69	4	5	9
Ham Green Red Cross Hospital (For Soldiers and Sailors) ...	12												
PRE-TUBERCULAR CHILDREN.													
*Frenchay Park Sanatorium, Frenchay, near Bristol ...	35	49	51	100	42	53	95	1	1	2	1	3	4
SURGICAL CASES.													
Cossham Hospital, Kingswood, Bristol (6 beds retained by payment of maintenance charges) ...	6	16	6	22	13	9	22	—	—	—	—	—	—
Lord Mayor Treloar Cripples' Hospital, Alton, Hants (patients sent in by arrangement, on payment of maintenance charges) ...	—	1	1	2	3	1	4	—	—	—	—	—	—
Orthopaedic Hospital, Redland, Bristol (patients sent in by arrangement on payment of maintenance charges)	—	7	4	11	6	2	8	—	—	—	1	—	1
Heatherwood Hospital, Ascot, Berks (patients sent in by arrangement on payment of maintenance charges	—	2	3	5	—	2	2	—	—	—	—	—	—

* This is the number of cases at present nursed in Frenchay Sanatorium, but it is hoped to bring the accommodation up to 100 eventually.

During the year the following cases were also admitted to various outside Institutions :—

	M.	F.	T.
Preston Hall Sanatorium and Training Colony, Kent	6	–	6
St. Michael's Home, Axbridge, Somerset ...	–	1	1
King Edward VII. Sanatorium, Midhurst	1	–	1
Coombe Park Orthopaedic Hospital, Bath	1	–	1
Norton House, Midsomer Norton	1	–	1
Total ...	9	1	10

The Council has approved of an arrangement for the provision of 60 beds for surgical tuberculosis in children, at Lord Mayor Treloar Cripples' Home at Alton and Hayling Island, and for 100 beds at Frenchay ; both these schemes have been delayed by the Ministry on the plea of economy. Six beds have been provided at Cossham Hospital for special adult surgical cases needing operative interference, and children will be admitted for surgical treatment to the Orthopædic Hospital.

There are now 194 adult beds for consumption, in addition to Frenchay for children, and the Committee feel assured that a very large amount of beneficial work will be secured as soon as full facilities are available for dealing with the early manifestations of Tuberculosis in childhood, upon which so much rests in the preventive treatment of this endemic disease.

MATERNITY AND CHILD WELFARE.

Report for Year 1924.

General Statistics.

Midwives in private practice	67
Midwives attached to Institutions, Homes, etc.	64
Total ...	131
Live births notified	7,098
Stillbirths ,, ...	237
Total ...	7,335
Notified by Doctors	1,158
,, ,, Midwives	5,353
,, ,, Relatives	824
Born living ... 3,627 males, 3471 females	
,, dead ... 121 ,, 116 ,,	
Home Visits by Health Visiting Staff :—	
First visits	6,711
Re-visits	62,550
Stillbirths	193
Ante-Natal	1,020
Other purposes	15,332
Total visits ...	85,806

Case Records transferred to S.M.O.

Health Visitors'	...	...	4,304
Infant Centres'	...	...	749
		Total ...	5,053

Assistance Grants :—

Milk Grants	...	...	5,815
Medical fees under Midwives Act, 1918			202
Provision of Maternity beds		...	7
,, ,, Doctor at confinement		...	4
,, ,, Midwife	...	...	8
,, ,, Home Help	...	...	1

Attendance at **Ante-Natal Clinics** :(5) —
Average attendance, 17.1.

New patients	...	...	1,043
Old patients	...	...	3,906
Post-Natal	...	...	365
		Total ...	5,314

Attendance at **Moorfields Infant Clinic** :—
Average attendance, 26.0.

New patients	...	...	828
Old patients	...	...	1,071
		Total ...	1,899

Schools for Mothers (21).

No. of women on books		...	2,431
,, infants under 1 year		...	1,305
,, ,, over 1 year		...	1,782

Midwives.—Employment of, or subsidy to, practising midwives by public health authority.

There is now no midwife subsidised by the public health authority. Midwives fees have, however, been paid wholly, or in part, in eight cases during the year.

OPHTHALMIA NEONATORUM.

Ophthalmia Neonatorum	Cases			Vision Unimpaired	Vision Impaired	Blindness	Still under Treatment	Deaths	Result not known
	Notified	Treated at Home	Treated at Hospital						
89	89	14	In-pt. 18 Out-pt. 57	85	1	Nil	Nil	1	2

Eye cases other than Ophthalmia Neonatorum				508
Vision unimpaired	...	...	...	494
Death before recovery	...	...	...	10
Result not known	...	...	...	4

Voluntary Schools for Mothers and Societies affiliated to the Bristol Infant Welfare Association and Council of School for Mothers.

SCHOOLS FOR MOTHERS AND INFANT CONSULTATION CENTRES.

School or Centre.	*Address.*	*Open.*	*Remarks.*
Barton Hill (University Settlement)	63 Barton Hill Road	Tues. 2.30—4 p.m. Wednesdays 2.15—4.15 p.m.	
Bedminster	62 West Street, Bedminster	Mon. & Thurs. 2—4.30 p.m. Wednesdays, Thrift Sewing Class 2.30—4.30 p.m. Citizen Club Wed. even. Nursery open, 3 p.m.	
Broad Plain	Girls' Club, 5 Broad Plain, St. Philip	Fridays, 2.30—4 p.m.	
Central	Central Hall, Old Market St.	Wednesdays, 2—4 p.m.	Opened January, 1925
Durdham Down	Mission House, Granby Hill, Durdham Down	Thursdays, 2.45 p.m.	
Eastville	St. Thomas' Parish Hall, Eastville	Wednesdays, 2.30—4 p.m.	
Hotwells	12 Dowry Sq.	Wednesdays and Thursdays 2.15 p.m.	
Horfield	Horfield Baptist Schools, Brynland Ave., Bishopston	Tuesdays, 2.30—4.30 p.m.	
Kingsdown	St. Matthew's Hall, Cotham Rd. South	Wednesdays, 2.30—4.30 p.m.	
Kingswood	Wesleyan Old Schoolrooms, Black Horse Rd., Kingswood Hill	Wednesdays, 2.30 p.m.	Situated in county district near City boundary
Knowle and Brislington	Y.M.C.A. Hall Totterdown	Fridays, 2—4 p.m.	
North Bristol	Brookland Inst., Lower Ashley Road	Tuesdays and Fridays, 2.30—4.30 p.m.	

School or Centre.	*Address.*	*Open.*	*Remarks.*
Moorfields (University Settlement)	City Mission, Russell Town Ave. St. Saviour's Mission, Chapter Street.	Mon. 2.15—4p.m. Fri. 2.45—4.15 p.m.	Under 1 yr. Over 1 yr.
Redcliffe	90 Redcliffe Hill	Tues. 2—4 p.m.	
Avonmouth and Shirehampton (University Settlement)	Baptist Chapel, Station Road, Shirehampton	Thursdays, 2.30—4.15 p.m.	
St. Augustine's	89-91 St. George's Rd.	Tues. and Fri., 2.30—4.15 p.m.	
St. Lawrence	St. Lawrence Church House, Leadhouse Rd., Lawrence Hill	Thursdays, 2.30—4 p.m.	
St. James' and District	10 Montague St., St. James'	Tuesdays, 2.30 p.m.	
St. Paul's	St. Paul's Mission House, Dean Lane	Wednesdays, 2.30—4 p.m.	
Temple	The Parish Hall, Church Lane, Temple	Thursdays, 2.30—4 p.m.	
Westbury	College House, Westbury-on-Trym	Wednesdays, 2.30—4 p.m.	

DAY NURSERIES.

School or Centre.	*Address.*	*Open.*	*Remarks.*
Bristol	27-29 Ashley Rd.	7.30 a.m. to 7 p.m. daily except Sats. & Suns.	Children taken temporarily as residents during illness of mothers.
Hotwells	12 Dowry Square	8 a.m.—6 p.m. Sat. 8 a.m.—1 p.m.	

NURSERY SCHOOL.

School or Centre.	*Address.*	*Open.*	*Remarks.*
The Friars	Rosemary St.	10 a.m.—12.15 Daily except Sat.	for toddlers 2—5 yrs.

Clinics and Treatment Centres.

MUNICIPAL ANTE-NATAL CLINICS.

Clinic.	*Address.*	*Open.*
Bedminster	62 West Street	Every Thursday, 10.30 a.m.
North Bristol	Brookland Inst., Lower Ashley Rd.	Every Tuesday & Wednesday, 10.30 a.m.
Redcliffe	90 Redcliffe Hill	Every Friday, 10.30 a.m.
St. Augustine's	89 St. George's Rd., Hotwells	Every Tuesday, 10.30 a.m.
University Settlement	63 Barton Hill Road	Every Friday, 10.30 a.m.

MUNICIPAL INFANT CLINIC.

Clinic.	*Address.*	*Open.*
Moorfields	38 Chapter Street, Dean Lane, Moorfields	Every Tuesday and alternate Wednesday, 10.30 a.m.

Hospitals provided or subsidised by the Local Authority.

The Maternity Hospital, Brunswick Square.

Opened February, 1921. In order to prevent closure owing to financial embarrassment, the Town Council has purchased these premises and leased them to the Voluntary Committee which originally acquired the buildings.

Provides 21 beds for married women only, including two in isolation room.

Any Institutional provision for unmarried mothers, illegitimate infants and homeless children in the district.

Homes for Unmarried mothers and babies.

Grove House, 148 Redland Road ... 12 beds and cots.
Bristol Maternity Hospital, Southwell Street ... ... 31 ,, ,,
Salvation Army Home, 89 Ashley Road 18 ,, ,,
Guardians' Institutions.

Homes for Homeless Babies.

Ashley House, Somerset Street, Kingsdown. 30 cots.
Guardians' Institutions.

JOHN C. HEAVEN, L.R.C.P., M.R.C.S., D.P.H.
M.O. i/c,
Maternity and Child Welfare Department.

D. S. DAVIES, M.D.,
Medical Officer of Health.

V. SUMMARY (for reference) OF NURSING ARRANGEMENTS, HOSPITALS AND OTHER INSTITUTIONS AVAILABLE FOR THE DISTRICT AND OTHER BENEVOLENT INSTITUTIONS AND SOCIETIES.

(Refer to Annual Report for 1921).

AMBULANCE FACILITIES.

(*a*) For Infectious cases.—3 Motor Ambulances maintained by Bristol Corporation.

(*b*) For non-infectious and accident cases.—6 Motor Ambulances (5 stretcher and 1 sitting) by Bristol City and Marine Ambulance Corps; 6 motor Ambulances (stretcher) by St. John Ambulance.

Various large firms in the City have their own private Ambulances for emergency cases.

PATHOLOGICAL EXAMINATIONS.

Special Pathological examinations at the Pathological Laboratory, University of Bristol (paid by fee).

1924.

		Positive.	*Negative.*	*Total.*
Typhoid Fever (Blood)	Typhoid ...	8	42	65
	Para. B ...	15		
(Fæces and Urine)	... ...	—	6	6
Cerebro-spinal Fever	... ...	—	1	1

	Virulent.	*Non-Virulent.*	*No K.L.B. found.*	
***Diphtheria** (for Virulence)	43	56	24	123

	Positive K.L.B.	*Hofmann.*	*Negative.*	
Diphtheria (swabs)	3	6	6	15

Milk.—55 examinations of milk samples were also carried out, and two samples were positive and one was suspicious of Tuberculosis. On receipt of the Pathologist's reports the necessary action was taken at the farms.

It would conduce to progress if the fee system were abolished and the Pathological work, routine and special, arranged with the University as an integral and necessary part of the Public Health Service.

* Of these, 79 were of patients at Ham Green Hospital to govern discharges.

PUBLIC HEALTH (MILK AND CREAM) REGULATIONS, 1912 and 1917.

Report for the Year ending December, 1924.

1. Milk; and Cream not sold as Preserved Cream.

(*a*)

	No. of samples examined for the presence of a preservative.	*No. in which a preservative was reported to be present, and percentage of preservative found in each sample.*
Milk	677	1
Skim Milk	13	2
Condensed Milk	2	nil
Cream	8	8

Samples undivided.	*Action taken under the regulations in regard to it.*
Cream .12% Boric Acid	Taken for experimental purposes.
,, .15% ,, ,,	,, ,, ,,
,, .15% ,, ,,	,, ,, ,,

Samples divided.

Milk .0006%	Formaldehyde.	Defendant bound over for 12 months
Skim Milk .01%	Boric Acid	,, ,, ,, 6 ,,
,, .027%	,,	,, fined £2
Cream .08%	,,	,, cautioned by order of committee
,, .19%	,,	,, fined £1.
,, .06%	,,	,, fined £1.
,, .03%	,,	,, fined £1.
,, .05%	,,	,, fined 10/-

2. Cream sold as preserved Cream ... 7

(*a*)

(1) Correct statement made ... 7
(2) Statement incorrect ... –

Total ... 7

(3) Percentage of preservative found:
.10, .01, .14, .16, .18, .10, .21
Percentage stated on statutory label: not exceeding .4

(*b*) Determination made of milk fat in cream sold as Preserved Cream:

(1) Above 35% ... 7
(2) Below 35 % ... –

(*c*) Nil.

(*d*) Nil.

3. Thickening substances, nil.

EDWARD RUSSELL, B.Sc., F.I.C.,
Public Analyst and Bacteriologist.

LABORATORY WORK.

Routine :—

Bacteriological examinations by the City Analyst :—

1924. No. of specimens examined 13,039 Diphtheria.
1 Widal.
813 Sputum.

(1163 specimens of Sputum were examined at the Bristol Municipal Tuberculosis Dispensaries).

17 samples of milk were examined, of these 9 were examined for the Maternity and Child Welfare Department.

23 samples of certified milk and 12 samples of graded milk were examined for the Ministry of Health.

DIPHTHERIA ANTITOXIN.

Diphtheria Antitoxin supplied by Bristol Corporation gratuitously, 1,690,000 units.

PUBLIC HEALTH STAFF (City).

Medical Officer of Health (whole time)	1 (Port also).
Deputy Medical Officer of Health and School Medical Officer (whole time) appointed Deputy, June 1924 ...	1
Home Nurses	3

CITY HOSPITALS.

Ham Green	Isolation Sanatorium	Whole-time Resident M.O. 1 Assistant do. ... 2 Matron and Nursing Staff— Hospital 54 Sanatorium 31
Novers Hill	(Smallpox or Fever)	Visiting Medical Officer (part time) ... 1 Nursing Staff (including Home Sister and Nursing Superintendent) ... 12
Frenchay Park		Visiting Medical Officer (Tuberculosis Officer, part time) ... ... 1 Matron and Nursing Staff 6

MUNICIPAL TUBERCULOSIS DISPENSARIES.

Tuberculosis Medical Officer	...	1
Assistant Do.	...	1
Tuberculosis Nurses ...	...	6

MATERNITY AND CHILD WELFARE DEPARTMENT.

Medical Officer-in-Charge (part time)	...	1
Health Visitors Superintendent	...	1
Assistant Superintendent.		1
Health Visitors.	...	21

ANTE-NATAL CLINICS AND INFANT CLINIC.

Visiting Medical Officers (part time)	...	3

VENEREAL DISEASES.

Medical Officer ...	...	0

(Work contracted out with Royal Infirmary and General Hospital).

INSPECTING STAFF.

Chief Sanitary Inspector ...	...	1
Superintendent ...	...	1
Meat and Food Inspectors	...	3
Dairies and Cowsheds ...	...	2
Workshops	...	1
Common Lodging Houses & Tenement Houses		1
District—until 1st July, 1924 ...	...	13

(After this date, 11)

Housing Inspectors.

Chief Housing Inspector ...	...	1
Inspectors	...	3

V. D. CLINICS.

	BRISTOL GENERAL HOSPITAL			BRISTOL ROYAL INFIRMARY			TOTALS		
	M.	F.	Total	M.	F.	Total	M.	F.	Total
Number of persons under treatment or observation on 1st January, 1924	794	268	1,062	1,647	600	2,247	2,441	868	3,309
Number of new cases dealt with during 1924 ...	278	64	342	476	156	632	754	220	974
Total attendances during the year	2,998	1,398	4,396	14,171	5,119	19,290	17,169	6,517	23,686
Aggregate number of " In-Patient " days of treatment given	351	24	375	209	121	330	560	145	705
Number of doses of Arsenobenzol compounds given		977			2,517			3,494	

Ham Green Hospital

Admissions and Discharges during 1924.

	Remaining in Hospital end of 1923	Admissions as Notified	Recovered	Died	Mortality Case Rate per cent.	Remaining in Hospital end of 1924
Scarlet Fever	19	241	211	2	.9	36
Diphtheria	114	862	667	50	6.9	167
Enteric Fever	3	11	12	—	—	2
Measles	1	6	5	—	—	—
Mixed infections and other diseases and observation cases	14	27	132	5	3.6	11
	151	1147	1027	57		214

Report of the Resident Medical Officer. Year 1924.

Diphtheria.

This disease still produces a high proportion of virulent cases. The case mortality rate of 6.9 per cent. is rather lower than the last three years, but still in excess of former years.

The average time in hospital of those recovering is eight to ten days longer than our former experience, *i.e.*, 45 days; compared with 35 to 37 days, as convalescence is more prolonged.

Schick Test and Protection by T.A.T.

All of our new members of Staff receive four inoculations on joining. Up to December, 1924, no one inoculated (144 persons) has contracted the disease; the period under review being now three years, nor has anyone been incapacitated from duty owing to inoculations.

During 1924, no member of the Staff contracted the disease, a unique event in the Hospital history.

Previous to these methods being used we had an average of five per annum attacked, while in the year previous to starting these methods twelve were attacked, some being very seriously ill.

Scarlet Fever.

Scarlet Fever has again been of a mild type with less than one per cent. mortality (0.9), although the proportion of seriously ill cases is showing a decided increase. The return case rate was 2.8 per cent.

Cross Infections.

Fourteen cases out of 1,147 admissions contracted a second disease in hospital (1.2 per cent.) Of these, 12 were Scarlet Fever, 1 Diphtheria, and 1 Chicken Pox. All these were in convalescent wards.

Our acute wards remained free of cross infection.

B. A. I. PETERS, M.D., D.P.H.,
Resident Medical Officer.

NOVERS HILL HOSPITAL.

Visiting Medical Officer's Report for 1924.

Cases remaining from 1923	32
Admitted	271
Males, 117. Females, 154.	
Discharged	167
Died	1
Remaining in hospital	35

Ages—

Under 1 year	1 to 5	5 to 15	Over 15
7	82	149	32

Average duration in hospital ... 32·52 days

Cases found not to be S.F.	5
Cases classed as doubtful	13
Secondary rashes or S.F. contracted in hospital	8

NOTE—These figures are a fair indication of the mildness of the type of the disease, making at times a positive diagnosis of S.F. almost impossible.

Other diseases—		*Complications*—	
Impetigo	... 6	Otorrhoea	... 10
Eczema	... 1	Mastoid Abscess	... 2
Chicken Pox	... 4	Adenitis	... 10
Smallpox	... 1	Nephritis	... 5
Heart disease	... 5	Rheumatism	... 5
		Endocarditis	... 1
		Pneumonia	... 1

Mixed Infections—Diphtheria—

These were a great source of trouble. 40 per cent. of the patients were Hofmann, throat and nose; 1.48 per cent. Positive K.L.B.

The Hospital was closed for the reception of Smallpox on 9th April, 1924, and opened again for Scarlet Fever on 14th May, 1924.

We had one case of Smallpox—a man aged 25—from a Spanish ship. A mild discrete form in a late stage. He had one indefinite mark of vaccination in infancy, and stated that he had been unsuccessfully re-vaccinated 14 days before he sickened with Smallpox. He was in hospital 24 days.

Two other contact cases were also admitted, but neither proved to be Smallpox.

The work at the hospital has during the year gone on very smoothly, and except for the one death from Septic Pneumonia and the occurrence of Smallpox there is nothing out of the ordinary to report.

E. H. C. PAULI,
Visiting Medical Officer.

1.—INSPECTION OF FACTORIES, WORKSHOPS AND WORKPLACES.

Including Inspections made by Sanitary Inspectors.

Premises (1)	Number of Inspections (2)	Written Notices (3)	Prosecutions (4)
Factories ... ... (Including Factory Laundries)	590	76	none
Workshops ... ... (Including Workshop Laundries)	1782	201	none
Workplaces ... ... (Other than Outworkers' premises)	—	—	—
Total ...	2372	277	none

2.—DEFECTS FOUND IN FACTORIES, WORKSHOPS AND WORKPLACES.

Particulars (1)	Number of Defects: Found (2)	Remedied (3)	Referred to H.M. Inspector (4)	Number of Prosecutions (5)
Nuisances under the Public Health Acts : *				
Want of cleanliness	185	185	4	none
Want of ventilation	9	9	—	
Overcrowding	—	—	—	
Want of drainage of floors ...	3	3	—	
Other nuisances	33	33	—	
Sanitary accommodation: insufficient ...	33	33	—	
Sanitary accommodation: unsuitable or defective ...	90	90	—	
Sanitary accommodation: not separate for sexes	15	15	—	
Offences under the Factory and Workshop Acts :				
Illegal occupation of underground bakehouse (s. 101) ...	—	—	—	
Other offences ... ... (Excluding offences relating to outwork and offences under the sections mentioned in the Schedule to the Ministry of Health (Factories and Workshops Transfer of Powers) Order, 1921).	—	—	—	
Total ...	368	368	4	none

* Including those specified in sections 2, 3, 7 and 8 of the Factory and Workshop Act, 1901, as remediable under the Public Health Acts.

D. S. DAVIES, M.D., *Medical Officer of Health.*

Steady progress has been made in re-conditioning unfit houses, but high price of materials and scarcity of labour still obstruct progress. We are still faced with the grave problems of building houses rapidly, abolishing slum houses and re-conditioning houses which are in a bad state of repair. The Local Authorities at the present time are only able to build houses to meet the demand arising from the normal growth of the population. Under existing circumstances the replacement of the slum house has not been and cannot be considered.

The question of rents of new houses is a serious one for the wage-earning classes; in many cases people who badly need houses are on the dole or receiving relief; in other cases men with long families find their wages are barely sufficient to provide food and clothing, and to meet a rent of 12/- to 16/- per week is an impossibility. One is compelled reluctantly to the belief that the State and Local Authorities will have to provide houses—irrespective of their cost—at a rent which the poorer workers can afford. It is surprising how avaricious some owners and tenants are. Many instances have been brought to my notice of owners demanding and obtaining, for small decontrolled houses, three and four times the pre-war rent, and of tenants sub-letting parts of their houses and extracting from the sub-tenants double or even more than double the rent which they have to pay.

It is very pleasing to note that Solicitors and prospective purchasers of houses are quite satisfied to settle contracts to purchase if they receive a certificate from the Housing Department that the houses have been repaired under the Housing Inspectors. It implies a guarantee that the repairs are adequate. I must thank many owners for the fair and reasonable spirit with which they carry out notices, and often wish tenants would reciprocate and willingly pay the additional rent that owners are entitled to charge for necessary improvements.

During 1924 four appeals against Demolition Orders, two against Closing Orders, and one against Formal Notices under Sec. 28 of the 1919 Housing, Town Planning, etc. Act were made. With regard to the four appeals against the Demolition Orders and the one against Closing Orders, enquiries were held and in each case the appeals were dismissed by the Minister of Health.

An enquiry was also held over the Eugene Street Improvement Scheme, and the Minister of Health has signified his approval of the Scheme, subject to three modifications.

During the year the building of 44 tenements at Lawford's Gate has been put in hand, and one block of 22 is nearing completion.

Plans have been prepared and a tender accepted for the erection of three houses to provide temporary accommodation for tenants who have to give up occupation of their dwellings to enable owners properly to re-condition their houses. Plans have also been approved for the erection of three maisonettes, on the site of two houses to be demolished, for the same purpose.

In addition to the houses made fit during the year, work of re-building and repairing has been started on 186 houses.

A. W. GRIFFITHS,
Chief Housing Inspector.

D. S. DAVIES, M.D.,
Medical Officer of Health.

HOUSING ACTS 1890 to 1923.

SYNOPSIS.

Total No. of houses inspected, 1910 to 1924 ...		22,309
No. found defective ...	15,344	
No. made fit	7,114	

Of the number found defective—1,352 houses are within Scheduled Areas, and only work of immediate and temporary nature is being carried out.

Total No. of houses **Represented as Unfit**, 1910 to 1924		3,034
No. of such houses repaired, 1910 to 1924 ...	942	
No. of such houses demolished, 1910 to 1924 (including 187 voluntarily after Closing Orders)	476	
No. of such houses outstanding at end of 1924...	1,616	
	——	3,034

Total No. of Closing Orders made, 1910 to 1924 ... (including 2 declarations to close made by Owners)		1,216
Total No. of Closing Orders determined ...	157	
Total No of houses demolished voluntarily ...	187	
Total No. of Demolition Orders made ...	575	
	——	919
Total No. of Closing Orders outstanding at end of 1924		297

Total No. of Demolition Orders made, 1910 to 1924		575
Total No. of Demolition Orders determined ...	49	
Total No. of Demolition Orders carried into effect	289	
	——	338
Total No. of Demolition Orders outstanding at end of 1924		237

Work done during the year 1924.

No. of houses visited by the Housing of the Working Classes Sub-Committee		246
Total No. of houses repaired—Represented Houses	72	
Informal Notices ...	28	
	——	100
No. of houses represented as unfit		282
No. of Formal Notices served under Sec. 28 of 1919 Act		73
No. of Formal Notices complied with— 6 of 1924		8
2 served previously		
No. of Specifications and Informal Notices served ...		166
No. of houses closed under Order		80
No. of Closing Orders determined		9
No. of Notices to Quit served		77
No. of Notices to Quit obeyed		27
No. of Demolition Orders made		42
No. of Demolition Orders determined ...		5
No. of houses demolished under Order ...		29
No. of houses demolished voluntarily after Closing Orders		4
No. of houses inspected during 1924 ...	285	

A. W. GRIFFITHS,
Chief Housing Inspector.

HOUSING ACTS, 1890 to 1923.

Synopsis of Action taken in regard to Houses represented as being Unfit.

YEAR	Reported as Unfit	Unfit Houses made Fit	FORMAL NOTICES		CLOSING ORDERS		No. of families dehoused	DEMOLITION ORDERS		DEMOLISHED		
			Served	complied with	Made	Determined		Made	Determined	Under Order	After C.O.	Voluntarily
1919 to 1923	1539	347	117	74	697	71	61	407	434	156	121	187
1924 ...	282	72	73	8	80	9	27	42	5	29	4	7
Totals	1821	419	190	82	777	80	88	449	439	185	125	194

Number of houses closed and demolished for extension of Business Premises, etc. and Street Improvements during 1924 ... 118

Total number of houses (all classes) erected during 1924—(a) As part of a Municipal Housing Scheme .. 387
(b) By Private Enterprise 684
... 1071

No. of Dwelling-houses inhabited at end of 1924 is estimated to be 75,015

No. of void houses 380

A. W. GRIFFITHS
Chief Housing Inspector.

SUMMARY OF PROCEEDINGS under Section 28 of the Housing, Town Planning, etc. Act, 1919, and Section 10 of the Housing, etc. Act, 1923.

Year	No. of houses.	No. of Houses Rendered Fit		No. of houses where Closing Orders have become operative.	No. of Notices outstanding.	Summary proceedings for recovery of expenses incurred. No. of houses.
		By Owners.	By Corporation in default of Owners.			
1919 to 1923	117	5 of 1919 15 of 1920 31 of 1921 11 of 1922 3 of 1923	9 of 22	—	27	—
1924	73	2 of 1922 5 of 1923	1 of 1924	2 of 1923	75 (*a*)	8 of 1922
Totals	190	72	10	2	75	8

(*a*) 10 notices cancelled and Closing Orders made.
21 notices cancelled.
—
31
—

A. W. GRIFFITHS,
Chief Housing Inspector.

SYNOPSIS OF HOUSES satisfactorily repaired under NOTICES and ORDERS.

Nature of work executed	Informal Notices and Specifications.					Formal Notices under Sec. 28.					Closing Orders.					Demolition Orders.				
	1920	1921	1922	1923	1924	1920	1921	1922	1923	1924	1920	1921	1922	1923	1924	1920	1921	1922	1923	1924
Structural Alterations, new additions & general repairs	1	15	24	25	28	—	—	1	19	2	—	1	2	3	8	—	6	9	3	3
Rebuilding & general repairs	19	31	52	21	21	1	—	4	24	2	—	14	11	7	1	—	5	6	15	2
General Repairs ...	70	96	102	17	29	2	18	—	5	4	—	7	2	5	—	—	—	—	—	—
Totals ...	90	142	178	63	78	3	18	5	48	8	—	22	15	15	9	—	11	15	18	5
	551					82					61					49				

ANNUAL TOTALS. 1920 ... 93
1921 ... 193
1922 ... 213 } 743
1923 ... 144
1924 ... 100

A. W. GRIFFITHS,
Chief Housing Inspector.

REPORT ON WORK OF SANITARY INSPECTORS FOR THE YEAR ENDING DECEMBER 31st, 1924.

Complaints received and attended to	2,787
No. of visits and re-visits on account of Nuisances, etc.	39,872
,, Informal Notices	2,224
,, Formal Notices and Orders served	235
,, Prosecutions for non-compliance	16
,, Articles disinfected	58,938
,, Articles destroyed	971
,, Houses disinfected	2,525
,, Visits to houses for infectious disease ...	3,065
,, Tests to drains	1,095

Summary of Work effected.

No. of drains relaid	201
,, drains partially re-laid	475
,, sink troughs fixed	351
,, sinks, drains, etc. trapped	741
,, W.C.'s fitted with new pans and traps ...	493
,, ,, repaired and cleansed	278
,, ,, fitted with flushing appliances ...	160
,, Additional W.C. accommodation	18
,, Houses repaired	814
,, Roofs repaired	913
,, Yards, etc., paved, floors repaired	985
,, Rooms cleansed, papered, etc.	1,874
,, Passages, etc., cleansed, papered,etc. ...	429
,, Cesspools abolished	7
,, Offensive deposits removed	184
,, Manure Pits or Refuse Bins provided ...	15
,, Pigs, etc. removed	70
,, Polluted Wells closed	3
,, Houses supplied with Co.'s water	23
,, Overcrowding nuisances abated	15
,, Other Nuisances abated	1,881
Total ...	9,930

D. S. DAVIES, M.D.,
Medical Officer of Health.

J. A. ROBINSON,
Chief Sanitary Inspector.

BRISTOL PORT SANITARY DISTRICT.

Report of the Medical Officers of Health for the Year 1924.

Port Sanitary Authority—The City Council.

Port Sanitary District permanently constituted—1894.

Rateable value of City (District Rate), 1924—£2,000,918.

Gross expenditure in connection with Port Sanitary Authority for financial year ended March 31st, 1925, £1566 6s. 7d., including expenditure of £168 7s. 1d. in connection with Aliens Order which is recoverable from the Government. The amount chargeable to the rates was £695 17s. 0d., which equals a rate in the £ of 0.19d.

The present condition of Port Sanitary work in Bristol is unsatisfactory, on account of, first, the loss of the Inspecting Launch, which has been sold and not replaced; and, secondly, the collision which put the Hospital Ship out of use, depriving us at once of hospital beds for ship-brought disease, and of a useful base for tide-service.

The war, so far from giving any excuse for slack supervision over Port Inspection, called for increased vigilance. Disease was rife on many of the battle-fronts, and the advent of peace has opened up closed trade routes, and may thus promote some wide diffusion of disease.

There would appear to be a tendency at present to overlook the importance of keeping the Port defences in a state of full preparedness. This is a fatal error, and may be followed by most serious consequences.

TONNAGE FROM FOREIGN PORTS—arriving at Bristol Docks (net registered tons) :—

City Docks, including Avonmouth and Portishead :—
1924, 3,335,909 tons.

GRAIN IMPORTS :—
1924—Qrs. 5,050,226 total for City, Avonmouth and Portishead Docks.

INSPECTING STAFF.

Chief Port Inspector :—

JOHN A. ROBINSON, San. Insp. Exam. Bd., London; Meat Insp. Cert., R. San. I.; Meat Insp. Cert., Liverpool Univ.; San. Science, Liverpool Univ.

Port Sanitary Inspectors :—

E. H. SCORRER, Meat Insp. Cert. R. San. I.; Cert. R. San. I.

W. R. GIBBS, Meat Insp. Cert. R. San. I.; Cert. R. San. I.

Assistant Port Sanitary Inspectors :—

C. W. GOULD, Cert. R. San I., and J. ROWE.

CHOLERA REGULATIONS.

Table A—Vessels from Foreign.

Arrivals during 1924 requiring Medical Inspection as :—

	Bristol.	Gloucester.	Totals.
Infected	...	...	...
Suspected	...	...	...
Having come from Infected Ports	40	...	40
Total	40	...	40

	Inspected in Walton Bay		Inspected in Kingroad		Bristol Boats Inspected at Dockside		
	Bristol Boats	Glo'st'r Boats	Bristol Boats	Glo'st'r Boats	Bristol	Avonmouth	Portishead
Infected	...	...	...	...	...	...	...
Suspected	...	...	...	...	...	...	...
Having come from Infected Ports	...	...	...	...	1	35	4
Total	...	...	...	...	1	35	4
	...		...		40		

A.—GENERAL MEDICAL INSPECTION.

1.—**Medical Examination** of passengers or crews arriving in the Port of Bristol is at present limited to :—

(*a*) Arrivals from "infected" or "suspected" Ports under the Cholera, etc. Regulations.

(*b*) Cases notified on arrival as having infectious sickness or suspicious illness on board.

(*c*) Aliens, since April 1st, 1920.

2.—**Port Medical Staff.**

The City Medical Officer of Health holds since 1886, the separate appointment of Port Medical Officer of Health, for which he receives an honorarium of £50* per annum. In

* Stabilised in 1923 at £100.

1907, duties under the Foreign Meat and Unsound Food Regulations were imposed. There is no salaried Assistant Port Medical Officer of Health, but an Assistant Port Medical Officer of Health was appointed by the Bristol Council in 1884, and is paid by fee for work done. The average cost of this medical assistance for Bristol Port over the five years, 1913-7 inclusive, was £45 17s. 1d. The cost for the year ended 31st March, 1925, was £55 12s. 10d.

The cost of Aliens Inspection is defrayed by the Central Government.

Two Emergency Port Medical Officers of Health (in private practice) are also appointed, but seldom called for; their fees are included in the above.

Certain work is also imposed upon the Bristol Port Sanitary Authority in respect of Gloucester-bound ships passing through Kingroad, under the Cholera, etc. Regulations; the cost of the work is defrayed by Gloucester.

Systematic Medical supervision under Food Regulations is not possible under existing conditions.

3.—Co-operation of Customs Officers.

All vessels arriving for the Port of Bristol pass through the anchorage of Kingroad. When the Customs Boarding Station was in Kingroad the Customs service was most useful, and cordially assisted in the working of the Cholera Regulations and other work. Since, however, the Customs Boarding Station has been removed from Kingroad, they are no longer in a position to intercept arrivals before they come into Avonmouth Dock, or take the river for Bristol, so that the Customs are a negligible quantity now in disease work so far as any information before docking is concerned.

4.—Port Inspection Launch.

In 1893, Bristol put a Port Inspection Launch on service in Kingroad, which obviated any difficulty, as sanitary boarding took place in Kingroad by arrangement with the Customs. The Port Inspection Launch was sold in 1912, and has not been replaced. A tug has to be hired when necessary to visit any vessel detained in Kingroad; otherwise arrivals cannot be inspected or passengers and crews examined until arrival at Dockside. This is the general rule. When a tug is not available, the vessel may escape inspection until docking.

5.—Naval and Military Aid.

During the naval and military occupation of Avonmouth Dock, safety was secured by working in co-operation. The D.A.D.M.S. Embarkation, Avonmouth, was particularly helpful. I have pointed out the added risks attending the loss of this protection, and following on the re-opening of communication with the Continent.

6.—Hospital Accommodation.

In 1893, Bristol provided a Hospital Ship for isolation and observation accommodation for ship-borne cases (20 beds). This was conveniently moored at the river mouth, but was run down in 1916, sold, and has not been replaced. The nearest available hospitals are the City Hospitals (6 miles). There are no " eontaet " shelters.

7.—Waiting Rooms.

Waiting rooms available for medieal examination—none over whieh the Port Sanitary Authority has eontrol.

8.—Cleansing and Disinfecting Station.

The nearest (6 miles) is at the Central Disinfeeting Station, Bristol.

The proeedure at present is :—

1.—Ship arrives at doekside or in river—Port Sanitary Inspeetor visits and enquires.

2.—If Infeetious Disease found, or if from infeeted Port, Medical Offieer advised and visits.

3.—Case and effeets removed to City Hospitals.

4.—Disinfection of eabins, ete. earried out.

5.—Rat preeautions, ete. earried óut for plague.

In any Reeonstruetion Scheme the following points need eonsideration :—

1.—If every arrival is to be medically examined, one whole-time Assistant Medieal Offieer of Health at least is absolutely neeessary, with neeessary reliefs.

2.—If vessels from Foreign Ports are to be visited and examined in the anehorage of Kingroad or in Walton Bay, the replaeement of the Sanitary Inspeeting Launeh is essential.

3.—If separate observation and isolation aeeommodation for ship-borne eases is to be provided as before, the Hospital Ship must be replaeed.

Personally we are of opinion that a secluded part of the Doek to whieh no aeeess from shore is permissible, would better serve in plaee of the Kingroad "Anchorage," under the Cholera Regulations, but whole-time medieal serviee in any ease is unavoidable for the medieal inspeetion of every ship arriving.

A Bathing, Cleansing and Disinfestation Centre at Avonmouth is neeessary to eomplete proteetion, espeeially in regard to Plague.

Diseases occurring on Ships during voyage or on arrival.

1924.	Name of Ship.	Loading Port.	Disease.	No.of cases	GENERAL PARTICULARS.
Jan. 6	s.s. " Patuca " ...	Kingston ...	Broncho-pneumonia	1	Left in Hospital at Kingston.
,, 8	,, " Dilluns " ...	Valencia ...	Influenza cold ...	2	Medically treated on arrival.
,, 11	,, " Hattiras " ...	Baltimore ...	Influenza ...	1	Do.
,, 16	,, " Colwith Force " ...	Antwerp ...	Do. ...	1	Do.
,, 17	,, " Scania " ...	Faro, Portugal ...	Bronchitis ...	1	Do.
,, 19	,, " Berwickshire " ...	Sydney ...	Mumps ...	2	Do.
Feb. 1	,, " Trewidden " ...	Basra ...	? ...	1	Man died during voyage—rash.
			Smallpox ...	1	Patient left at Basra.
				2	Admitted Novers Hill Hospital for observation.
			Enteric Fever ...	1	Medically treated on arrival.
,, 8	,, " Shahristan " ...	Basra ...	Gastric Influenza ...	1	,, ,, ,, ,,
,, 14	,, " Tregonell " ...	Bunbury W. Australia ...	Venereal Disease ...	1	Do.
,, 14	,, "Canadian Skirmisher"	Vancouver ...	Influenza ...	1	Patient removed to Bristol General Hospital.
,, 15	,, " Poona " ...	London ...	Boils ...	1	Patient medically treated.
,, 17	,, " Eastern Pilot " ...	New York ...	Appendicitis ...	1	Patient admitted to Bristol Royal Infirmary.
Mar. 15	,, " Gilgai " ...	Sydney ...	Pulmonary Tuberculosis ...	1	Patient admitted to Southmead Infirmary.
,, 15	,, " Sikla " ...	Porsgrund,Norway	Venereal Disease ...	1	Patient admitted to Eastville Institution.
,, 22	,, " Dromore " ...	Odessa ...	...	1	Patient admitted to Bristol Royal Infirmary.
,, 25	,, " Yokohama " ...	Antwerp ...	Inflammation of Kidneys ...	1	Patient proceeded home.
,, 26	,, " Port Gwarra " ...	Karachi ...	Venereal Disease ...	2	Medically treated on arrival.
			Dysentery ...	1	Patient admitted to Bristol General Hospital.
April 7	,, " Rius-y-Taulet " ...	Valencia ...	Smallpox ...	1	Patient admitted to Novers Hill Hospital.
,, 19	,, " Eastern Pilot " ...	New York ...	Sore Throat ...	1	Patient medically treated.
,, 20	,, " Coronado " ...	Kingston ...	Scarlet Fever ...	1	Patient admitted to Ham Green Hospital.
				1	Man died at sea.
,, 27	,, " Changuinola " ...	Tela,via Kingston	Colic ...	1	,, ,, ,,
May 12	,, " Silva Gouvaia " ...	Bissen, Portuguese W. Africa ...	Malaria ...	1	Patient admitted to Bristol General Hospital.
,, 13	,, " Tyra Bratt " ...	Gothenburg, Sweden ...	Rheumatism ...	1	Medically treated on arrival.
,, 19	,, " Eros " ...	Burriana, Spain ...	Venereal Disease ...	1	Do.
,, 22	,, " Greyfriars " ...	Hamburg ...	Cough and weakness	1	Do.
,, 27	,, " Maihar " ...	Calcutta ...	Dysentery ...	1	Admitted to Hospital at Aden.
			Obstruction ...	1	Admitted to Southmead Infirmary.
,, 28	,, " Kohistan " ...	Basra ...	Dysentery ...	1	Admitted to Hospital at Basra.
,, 30	,, " Menevian " ...	Burnana, Spain ...	Venereal Disease ...	1	Admitted to Cardiff Hospital.
June 4	,, " Fredensborg " ...	Bathurst ...	Venereal Disease ...	1	Medically treated at Bristol Royal Infirmary.
,, 19	,, " River Lagan " ...	Bilbao ...	Do. ...	1	Do.
,, 22	,, " Motagua " ...	Kingston ...	Whooping Cough ...	1	(Convalescent on arrival).
,, 26	,, " Sappho " ...	Antwerp ...		1	Man lost overboard.
,, 29	,, " Cavalla " ...	Alexandria ...	Boils ...	1	Medically treated on arrival.
July 4	,, " San Gil " ...	Port Limon ...	Venereal Disease ...	1	Medically treated on arrival.
,, 10	,, " Varing " ...	Irangsund, Sweden	Venereal Disease	1	Do.
,, 13	,, " Kaparika " ...	Archangel ...	Appendicitis ...	1	Admitted to Hospital at Traulst.
,, 14	,, " City of Bombay " ...	Karachi ...	Glossitis. ? Specific ...	1	
,, 21	,, " Lord Guilford " ...	Rosario, . rgentina	Rheumatic Fever ...	1	Landed at St. Vincent.
			Pneumonia ...	1	Do.
,, 22	,, " Berwickshire " ...	Brisbane,Australia	Acute Croupous Pneumonia ...	1	Died in Southmead Infirmary.
,, 30	,, " City of Dunedin " ...	Buenos Aires ...		1	Admitted to Cardiff Hospital.
Aug. 2	,, " Calumet " ...	Karachi ...	Venereal Disease ...	1	Medically treated on arrival.
,, 4	,, " Motagua " ...	Tela, Honduras ...	Pleurisy and Pneumonia ...	1	Do.
,, 17	,, " Burma " ...	Rangoon ...	Septic Sinus, R.ankle	1	Do.
,, 20	,, " Baron Polwarth " ...	Karachi ...	Abscess ...	1	Medically treated at Karachi.
,, 26	,, " Asplund " ...	Archangel ...	Venereal Disease ...	1	Medically treated in Bristol Royal Infirmary.
,, 26	,, " Millpool" ...	Karachi ...	Do. ...	1	Discharged home for treatment.
,, 29	,, " Panaghes M. Hadonics " ...	Bathurst, Gambia	Malaria ...	3	
			Observation ...	1	
Sept. 17	,, " Frankenfels " ...	Karachi ...	Myocardial degeneration ...	1	Died.
,, 23	,, " Skeene " ...	Casa Blanca ...	Malaria ...	1	Admitted to Bristol General Hospital.
			Gastric Influenza ...	1	Do.
Oct. 1	,, " Gertrud " ...	Stockholm ...	Accidental injury ...	1	Medically treated in Sweden.
,, 6	,, " Woerden " ...	Smyrna ...	? Appendicitis ...	1	Died in Hospital at Algiers.
			Abdominal pain ...	2	Medically treated
,, 24	,, " La Rouchefoucould'	Nantes ...	Tuberculosis of Lung	1	Admitted to Southmead Infirmary.
,, 25	,, " Gorontalo " ...	Karachi ...		1	Death during voyage.
,, 27	,, " Trevose " ...	Buenos Aires ...	Abdominal pain ...	1	Medically treated
Nov. 7	,, " Italia " ...	Antwerp ...	Injured foot ...	1	Medically treated on arrival.
			Severe cold ...	1	Do.
			Discharging ears ...	1	Do.
,, 16	,, " Coronado " ...	West Indies ...	Scarlet Fever ...	1	Admitted to Ham Green Hospital.
,, 19	,, " Memphis " ...	Hamburg ...	Severe cold ...	1	Medically treated.
Dec. 6	,, " Ashtabula " ...	New York ...	Chest complaint ...	1	Do.
,, 12	,, " Ada " ...	Alexandria ...	Dysentery ...	2	Left in Hospital at Alexandria.
,, 13	,, " Trevanion " ...	Karachi ...	Plague ...	2	Cases occurred on outward journey. (Left in Hospital at Port Said.)
			? Bronchitis ...	1	Left at Suez.
,, 15	,, " Chicago City " ...	New York ...	Pain in kidney ...	1	Medically treated on arrival.
,, 18	,, " Ravla " ...	Valencia ...	Venereal Disease ...	1	Admitted to Hospital at Cardiff.
,, 21	,, "Canadian Freighter"	Vancouver ...		1	Death by drowning.
,, 26	,, " Italia " ...	Rotterdam ...	Hydrocephalus ...	1	Died in Southmead Infirmary.

DANGEROUS DRUGS ACT, 1920.

Circulars Nos. 357 and 1095.

The Port Sanitary Sub-Committee agreed to allow the Assistant Port Medical Officer to carry out any work in connection with these Circulars.

Association of Port Sanitary Authorities.

The Chairman of the Port Sanitary Sub-Committee and the Port Medical Officer of Health attended Meetings of this Association in London on 29th May, 1924 and 3rd October, 1924.

FORM A.

Amount of Shipping entering the Port Sanitary District during the year 1924.

1923.	Number.	Tonnage.	Number Inspected.		Number reported to be Defective.	Number of Orders issued (informal).	Number of Formal Notices.
			By the Medical Officer of Health.	By the Sanitary Inspector.			
Foreign—							
Steamers	1,049	2,156,021	44	1,049	128	126	2
Sailing	6	3,517	—	6	—	—	—
Fishing	—	—	—	—	—	—	—
Total Foreign	1,055	2,159,538	44	1,055	128	126	2
Coastwise—							
Steamers	4.642	1,027,575	—	607	51	49	2
Sailing	1,537	148,796	—	200	10	10	—
Fishing	—	—	—	—	—	—	—
Total Coastwise	6,179	1,176,371	—	807	61	59	2
Total Foreign and Coastwise	7,234	3,335,909	*44	1,862	189	185	4

* Not including 39 vessels individually inspected under the Aliens Order.
Including 179 ,, ,, ,, from Irish Free State.

RATS AND MICE DESTRUCTION ACT, 1919.

This Act is administered by a Rats Officer, acting under the instructions of the City Engineer.

At Avonmouth Docks a rat-catcher is employed by the Docks Committee in clearing the sheds and warehouses. He is given authority to work on board ship in the docks, for which he is compensated by the master or agents.

At Bristol Docks, the Rats Officer supervises the destruction of the rats in the sheds and in the granaries, and conducts a systematic search for the rodents.

The following tables give the results of their work.

FORM B.

1924 **RATS DESTROYED IN 1924. (Avonmouth Docks).**

Number of Rats.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total in Year
Caught alive	416	410	341	417	610	171	441	405	238	390	405	417	4,661
Found dead	319	370	433	419	360	314	453	438	234	254	173	592	4,359
Total	735	780	774	836	970	485	894	843	472	644	578	1,009	9,020
From Sheds and Warehouses in Docks	735	780	760	809	920	434	775	712	472	644	449	539	8,029
From Ships in Dock ...	—	—	14	27	50	51	119	131	—	—	129	470	991
Total	735	780	774	836	970	485	894	843	472	644	578	1,009	9,020
Rats examined	10	19	14	9	16	—	16	8	—	14	14	16	136
,, infected with plague ...	—	—	—	—	—	—	—	—	—	—	—	—	—
,, not infected	10	19	14	8	13	—	16	8	—	14	14	16	136

Of the 136 rats examined at the University of Bristol, there were 47 Black Rats, 74 Brown Rats, 15 Alexandrine Rats.

March	22,000	poison	baits	laid by Rat Catcher.
August	22,000	do.	do.	do.
September	22,000	do.	do.	do.
November	2,400	do.	do.	do.
	68,400			

BRISTOL DOCKS.*

1924.		Traps Laid.	Rats Caught.	Poisoned Baits Laid.	Baits Taken.
January	...	384	69	600	About Two-thirds
February	...	384	76	500	
March	...	288	50	600	
April	...	372	75	600	
May	...	348	69	—	
June	...	300	54	750	
July	...	494	88	1,550	
August	...	324	53	600	
September	...	336	49	550	
October	...	312	74	500	
November	...	348	68	500	
December	...	300	66	—	
Total	...	4,190	791	6,750	

* Figures supplied by City Rats Officer.

PORTISHEAD DOCKS.

1924.				Rats caught and destroyed.
January	...	...	...	23
February	...	...	...	30
March	...	...	...	—
April	...	...	...	—
May	...	...	...	18
June	...	...	...	—
July	...	...	...	—
August	...	...	...	12
September	...	...	...	—
October	...	...	...	—
November	...	...	...	27
December	...	...	...	20
			Total	130

D. S. DAVIES, M.D.,D.P.H.,
Port Medical Officer of Health

JOHN C. HEAVEN, L.R.C.P.,M.R.C.S.,D.P.H.,
Assistant Port Medical Officer of Health.

PRECAUTIONS AGAINST PLAGUE.

FORM C.

Particulars relating to Vessels "infected" or "suspected" or from "infected" Ports.

1924 Name of Vessel	Date of Arrival	Whether "infected," "suspected" or from "infected" Port	Method of Rat destruction employed			No. of Rats killed	Whether Certificate of Deratisation was issued	Remarks
			Fumigation by Sulphur Dioxide	Fumigation by Hydrocyanic Acid	Trapping, Poisoning, etc.			
1	2	3	4	5	6	7	8	9
s.s. "Trewidden"	Feb. 1	Infected Port						
,, "Umlazi"	,, 11	,,						
,, "St. Stephen"	,, 18	,,						
,, "Aspasia Stavroudi"	Mar. 2	,,						
,, "Gilgai"	,, 15	,,						
* ,, "Portgwarra"	,, 26	,,						
,, "Portfield"	Apr. 11	,,						
,, "Willesden"	,, 16	,,						
,, "Frankenfels"	May 2	,,						
,, "Maihar"	,, 27	,,						
,, "Kohistan"	June 4	,,						
,, "Shahristan"	,, 21	,,						
,, "City of Bombay"	July 14	,,						
,, "Freinfels"	,, 19	,,						
,, "Hampstead"	,, 25	,,						
,, "Warwickshire"	,, 28	,,						
,, "Kurmark"	,, 30	,,						
,, "Calumet"	Aug. 1	,,						
* ,, "Elswick House"	,, 13	,,						
,, "Burma"	,, 18	,,						
,, "Baron Polwarth"	,, 20	,,						
,, "Minaar"	,, 26	,,						
,, "Millpool"	,, 26	,,						
,, "Herefordshire"	,, 27	,,						
,, "Baron Inchcape"	Sept. 1	,,						
,, "Silver Birch"	,, 3	,,						
,, "Frankenfels"	,, 18	,,						
,, "Brauenfels"	Oct. 3	,,						
,, "Kemmindene"	,, 20	,,						
,, "Urbino"	,, 21	,,						
,, "Gorontelo"	,, 25	,,						
,, "N. G. Sactouris"	Nov. 5	,,						
,, "Hillcroft"	,, 24	,,						
,, "Trevaylor"	,, 28	,,						
,, "Sunbank"	Dec. 12	,,						
,, "Trevanion"	,, 13	,,						
,, "Ada"	,, 13	,,						
,, "Pagu"	,, 18	,,						
,, "Carthage"	,, 26	,,						

* Portishead.

N.B. The greater proportion of these Vessels have only part cargo to discharge in Bristol, and go elsewhere to complete.

VESSELS (other than those dealt with in Form C) SUBJECT TO MEASURES OF RAT DESTRUCTION.

Number of Vessels fumigated by Sulphur Dioxide.	No. of rats killed	No. of Vessels fumigated by Hydrocyanic Acid.	No. of rats killed	No. of Vessels where trapping poisoning, etc. were employed.	No. of rats killed	No. of Fumigation Certificates issued on Form " Port 10 "	No. of other Certificates issued	Remarks.
1.	2.	3.	4.	5.	6.	7.	8.	9.
s.s. " Motagua "	—	ss. " Nerbudda"	22	s.s. " Maresfield "	42	s.s. " Nerbudda "		*12,780 poisoned baits were laid in the holds, between decks, peaks, etc. of 7 Vessels after discharge of cargo.
,, " Camito "	—			* ,, " Changuinola"	—	,, " Motagua "		
,, " Exeter City "	—			* ,, " Oxonian "	75	,, " Camito "		
,, " Coronado "	—			* ,, " Welshman "	25	,, " Exeter City "		
,, " Chicago City "	—			* ,, " Turcoman "	22	,, " Coronado "		
,, " Bayano "	—			* ,, " Cornishman "	29	,, " Chicago City "		
,, " Bristol City "	—			* ,, " Caledonian "	27	,, " Bayano "		
,, " San Blas "	—			* ,, " Motagua "	81	,, " Bristol City "		
,, " Wells City "	—			,, " Cadillac "	19	,, " San Blas "		
,, " Parthenia "	24			,, " Sallie "	—	,, " Wells City "		
,, " Chicago City "	—					,, " Parthenia "		
,, " Concordia "	68					,, " Chicago City "		
,, " Exeter City "	—					,, " Concordia "		
,, " Camito "	—					,, " Exeter City "		
,, " Ruapehu "	—					,, " Camito "		
,, " Boston City "	—					,, " Ruapehu "		
,, " Coronado "	—					,, " Boston City "		
,, " New York City "	—					,, " Coronado "		
,, " Cavina "	—					,, " New York City"		
,, " Cabotia "	—					,, " Cavina "		
,, " Bayano "	4					,, " Cabotia "		
,, " Welshman "	83					,, " Bayano "		
,, " Oxonian "	78					,, " Welshman "		
,, " Cornishman "	93					,, " Oxonian "		
,, " Caledonian "	97					,, " Cornishman "		
,, " Turcoman "	202					,, " Caledonian "		
						,, " Turcoman "		
	649		22		340			

D. S. DAVIES, M.D., *Port Medical Officer of Health.*

JOHN C. HEAVEN, *Assistant Port Medical Officer of Health.*

MEDICAL INSPECTION OF ALIENS.

PORT SANITARY DISTRICT OF BRISTOL.

Annual Return by the Medical Inspector of Aliens for Year ended 31st December, 1924.

Total No. of Aliens arriving at the Port, including those in transit and transmigrants, but excluding Alien Seamen (1)		No. of temporary visitors, i.e., Aliens whose stay in this country will not exceed three months (2)			No. of Aliens who intend to settle permanently or remain in this Country for more than three months. (3)		
Total Number	No. subjected to medical inspection*	Total Number	No. subjected to medical examination.†	No. of Certificates issued.	Total Number	No. subjected to medical ‡examination.	No. of Certificates issued.
304	239	102	—	—	‡ 27	13	—

ALIENS IN TRANSIT. (4)			TRANSMIGRANTS. (5)	
Total Number.	No. subjected to medical examination †	No. of Certificates issued.	Total Number	No. subjected to Medical examination†
175	—	—	—	—

*The term "Inspection" relates to the preliminary inspection of aliens to pass before the Medical Inspector —
†The term "Medical Examination" relates to detailed medical inspection ... —
‡Included in this total are 8 Diplomats and 6 Residents returning who are exempt from medical examination —

Particulars relating to Detailed Medical Examination of Aliens.

6. Aliens who were subjected to detailed medical examination and were not certified by Medical Inspector 13

7. Number of each of the following certificates issued by the Medical Inspector of Aliens :—

   (*a*) Certificate that an alien is a lunatic, idiot, or mentally deficient ... ... —

   (*b*) Certificate that, for medical reasons, it is undesirable that an alien should be permitted to land ... ... —

   (*c*) Certified that an alien is suffering from some disease, defect or deformity, which may interfere with his capacity to support himself or his de endents ... ... —

   (*d*) Certificate that an alien is suffering from one of the acute infectious diseases ... ... —

   (*e*) Certificate that for the purposes of an adequate medical examination, it is necessary for the alien to land in order that he may be examined ashore ... ... —

Transmigrants.

8. Number of certificates of the cleansing of verminous transmigrants given by the Medical Inspector of Aliens to the Immigration Officer ... ... —

9. Number of medical certificates in respect of transmigrants suffering from trachoma, fevers, etc., given to the Immigration Officer ... ... —

Particulars relating to Alien Traffic.

10. Total number of passenger vessels carrying aliens which arrived during the year 37

Number of passenger vessels dealt with by Inspector of Aliens 33

11. Total number of cargo vessels carrying alien passengers which arrived during the year 35

Number of cargo vessels dealt with by Inspector of Aliens 6

12. Any other vessels in connection with which the Medical Inspector has had to take action in regard to aliens ... ... —

JOHN C. HEAVEN,
L.R.C.P., M.R.C.S., D.P.H.,
Medical Inspector of Aliens.

D. S. DAVIES, M.D.,
Supervising Medical Inspector of Aliens.

BRISTOL PORT SANITARY DISTRICT.

Report of the Chief Port Sanitary Inspector for the Year 1924.

The Number of ships inspected at Avonmouth Dock or River entrance during 1924 was ... 638

By tug in Walton Bay or Kingroad 3

Total ... 641

Number of ships bound to the Port of Gloucester, 0.

The number inspected in Dock after arrival, 1,862.

The nationality and the number of ships dealt with, and defects found, were as follows :—

Nationality.	No. of Ships.	No. having Defects.
British	1,443	149
American	81	3
Danish	28	1
Dutch	35	1
French	31	3
Greek	11	5
German	52	2
Italian	11	6
Japanese	2	2
Norwegian	67	9
Finland	2	1
Spanish	21	12
Swedish	54	5
Portuguese	1	—
Dantzic	3	—
Latvian	1	1
Brazilian	8	2
Russian	2	1
Peruvian...	1	—
Totals ...	1862	203

Percentage of the total number, 11%

PORT SANITARY. **Bristol.**

TABLE A.

SHIP INSPECTION AT BRISTOL, AVONMOUTH, PORTISHEAD AND KINGROAD DURING THE YEAR **1924**

Showing Particulars of Inspection, the Action taken, and results.

FROM FOREIGN PORTS.

Description of Ships 1925	Steamship	Sailing	British	Foreign	Forecastles, etc. requiring Re-painting	Forecastles, etc. in Dirty condition	With Defective Ventilation or Lighting	Foul Bilges or Deposits	Water Closets or Paint Lockers connected with Living Spaces	Defective Closets	Foul Closets	Requiring Lining of Iron Plates over Sleeping Bunks	Bad Water Supply or unclean Tanks	Leakages into Living Spaces	Accumulation of Manure between Decks	Dilapidations in Crews' Spaces	Dirty Galleys	Defective Drainage	Total Sanitary Defects	Informal Notices Complied with	Informal Notices in Abeyance	Written Notices Complied with	Written Notices in Abeyance	Ships Visited or Spoken in Kingroad or River	Revisits to enforce Notices, Health of Crew, and Regulations carried out	No. of Persons Inhabiting Ships Inspected
British Steamers from Foreign Ports	640	—	640	—	19	58	7	4	1	2	10	—	4	10	2	3	—	2	122	78	—	2	—	406	602	30,708
British Sailers from Foreign Ports	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Foreign Steamers from Foreign Ports	409	—	—	409	—	26	1	2	—	4	13	—	—	7	—	—	1	—	54	45	—	—	—	209	278	10,333
Foreign Sailers from Foreign Ports	—	6	—	6	—	3	—	—	—	—	—	—	—	—	—	—	—	—	3	3	—	—	—	5	6	59
Totals ...	1049	6	640	415	19	87	8	6	1	6	23	—	4	17	2	3	1	2	179	126	—	2	—	620	886	41,100

COASTWISE

British Steamers from Coastwise	604	—	604	—	6	37	—	—	—	—	9	—	—	13	—	—	—	—	65	49	—	2	—	36	76	7,824
British Sailers from Coastwise	—	199	199	—	2	8	—	—	—	—	2	—	—	2	—	—	—	—	14	10	—	—	—	—	26	496
Foreign Steamers from Coastwise	3	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	64
Foreign Sailers from Coastwise	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6
Total Coastwise	607	200	803	4	8	45	—	—	—	—	11	—	—	15	—	—	—	—	79	59	—	2	—	36	102	8,390
Total Foreign	1049	6	640	415	19	87	8	6	1	6	23	—	4	17	2	3	1	2	179	126	—	2	—	620	886	41,100
Grand Total ...	1656	206	1443	419	27	132	8	6	1	6	34	—	4	32	2	3	1	2	258	185	—	4	—	656	998	49,390

1924.

TABLE B.

Class of Vessels.	Number Inspected.	Number having Defects.	No. of Notices Issued.	Per-centage Defective.
From Foreign	1,055	128	128	12.1
From Coastwise ...	807	61	61	7.5
	1,862	189	189	10.1
British Steamers ...	1,244	141	141	11.3
,, Sailers ...	199	10	10	5.0
	1,443	151	151	14.7
Foreign Steamers ...	412	45	45	10.9
,, Sailers ...	7	3	3	43.0
	419	48	48	11.2

TABLE C.

List of Chief Foreign Ports from which Ships have arrived and have been inspected.

1924

Name of Port or District	No. of Vessels	Name of Port or District	No. of Vessels
French	124	*Brought forward* ...	698
Dutch and Belgian ...	83	Newport News and Norfolk, Va. ...	3
Norwegian, Swedish and Danish... ...	65	New Orleans and Gulf of Mexico	49
Russian and Finnish ...	39	Jamaica, Port Limon and West Indies ...	43
Spanish and Portuguese	112	Philadelphia, Savannah, Boston and Baltimore	48
German	105	Cuba	1
Italian	7	New York and Portland (Me.)	56
Greek	8	Canadian Ports ...	74
Alexandria and Malta ...	8	River Plate, Bahia Blanco and Rio de Janeiro	52
Persian Gulf	18	Manchuria	2
North African... ...	19	Rumanian	5
South ,, ...	1	Turkey in Asia ...	3
West ,, ...	6	Trinidad	6
East Indies, West Indies, Java and Singapore ...	18	Tela, Honduras ...	7
Bombay, Calcutta, Rangoon and Karachi	27	Peru and Chili ...	8
Australia and New Zealand	28	Irish Free State ...	179
San Francisco and Portland (Oregon) ...	30		
Carried forward ...	698	*Total*	1,234

1924

No. of these defects which consisted of non-attention to general cleaning and washing operations ...	352
Total No. of Ships inspected after arrival in the various Docks	—
Total No. of various defects found in ships inspected ...	258
No. of ships in which these defects occurred ...	189
No. of ships in which fumigation was carried out at request of owners, certificates given by Port M.O.H.	27
Total No. of dirty or infected beds destroyed ...	1,998
Total No. of bilges disinfected	74
Special Rat Precautions on ships from Plague-infected Ports	39
No. of special visits made to ships from " suspected " Ports	295

The Port Sanitary Inspectors and Assistant Inspectors have discharged their duties with zeal and thoroughness.

I beg to acknowledge the assistance and information received from the Port Sanitary Officers of Cardiff, Newport, Barry and Swansea, in following up ships on which requirements had been made.

J. A. ROBINSON,
Chief Port Sanitary Inspector.

D. S. DAVIES, M.D.,
Port Medical Officer of Health.

ANNUAL REPORT OF CANAL BOAT INSPECTION FOR THE YEAR 1924.

I beg to submit a Report in accordance with the requirements of Section 3 of the Canal Boats Act, as to the work done in carrying out the Regulations during the year 1924, with a summary of the contraventions and defects found in the canal boats examined.

1. The duties have been discharged by the Chief Port Sanitary Inspector and an Assistant Inspector, in conjunction with ship inspection work.
2. The number of inspections made was 34, confined to four boats which are used regularly. No women or children are carried on board boats in this district.
3. *Particulars of Inspection—*
   - (*a*) **Registration.**—All boats have been registered at some time.
   - (*b*) **Notification of Change of Masters.**—This Authority is not a Registration Authority, consequently no notifications were received.
   - (*c*) **Certificates.**—Certificates were produced when required.
   - (*d*) **Marking.**—All boats inspected were properly marked.
   - (*e*) **Overcrowding.**—None was discovered or reported.
   - (*f*) **Separation of Sexes.**—No infringement was found.
   - (*g*) **Cleanliness.**—Cabins were kept fairly clean.
   - (*h*) **Ventilation.**—The regulation openings were available in all cases.
   - (*i*) **Painting of Cabin Interiors.**—Two notices were served and complied with.
   - (*j*) **Provision of Water Casks.**—No contravention of the Regulations was found. Two and four gallon stoneware jars are preferred in this district.
   - (*k*) **Removal of Bilge Water.**—No excessive accumulations were noted.
   - (*l*) **Notification of Infectious Disease.**—No cases were found or reported.
   - (*m*) **Refusal to Admit.**—None.
   - (*n*) **Dilapidation, etc.**—No infringement was found.
4. No legal proceedings have been required.
5. Two notices were served to paint cabins—these were complied with.
6. Any cases arising of an infectious nature would be dealt with and isolated by the Port Sanitary Committee.
7. No detention of boats was required.
8. No register kept.

J. A. ROBINSON,
Chief Port Sanitary Inspector and Inspector of Canal Boats.

D. S. DAVIES, M.D.,
Port Medical Officer of Health.

PORT OF BRISTOL.

PUBLIC HEALTH (REGULATIONS AS TO FOOD) ACT, 1907.

UNSOUND FOOD AND FOREIGN MEAT REGULATIONS, 1908.

FOREIGN MEAT REGULATIONS (AMENDMENT), 1909.

TABLE I.

Amount of Food examined during 1924.

1. Fresh or Frozen Beef, etc.

Frozen beef	10,563	quarters.
,, mutton	43,585	carcases.
,, legs	2,060	
,, lamb	74,585	carcases.
,, pork	3,104	,,
,, pork sides ...	835	bales.

2. Cured or Salted Beef and Pork (including Bacon and Hams).

Bacon and Hams ...	31,541	cases.
Bacon	1,265	bales.
Mess Beef	66	tierces.
,, Pork	5	,,
Hog Casings	33	,,

3. Canned Meats, Fish, Fruits, Milk, etc.

Canned beef	18,139	cases.
,, ox tongues ...	6,112	,,
,, heep ,, ...	450	,,
,, pork ,, ...	800	,,
,, lobster	30	,,
,, salmon	46,673	,,
,, apples	4,855	,,
,, apricots ...	52,556	,,
,, apricot pulp ...	1,430	,,
,, asparagus ...	1,411	,,
,, fruit salad ...	12,441	,,
,, loganberries ...	6,472	,,
,, cherries ...	6,430	,,
,, peaches ...	46,749	,,
,, pears	61,568	,,
,, pines	7,884	,,
,, strawberries ...	1,936	,,
,, soup	13,000	,,
,, pickles	163	tierces.
,, pickles	25	cases.
,, oysters	26	barrels.
,, prawns	704	cases.
,, pilchards ...	144	,,
Canned pork and beans ...	2,400	cases.
,, baked beans ...	2,590	,,
,, peas	5,310	
,, plums	7,756	
,, raspberries ...	6,861	
,, tomatoes ...	12,722	

,, condensed milk ...	66,498	,,
,, ,, ,, ...	2,181	barrels.
,, evaporated milk ...	27,863	cases.

4. Fresh and Dried Fruits and Vegetables, etc.

Bananas	4,223,315	bunches.
Oranges	401,949	cases.
Mandarins	5,289	,,
Apples	33,540	barrels.
Apples	28,740	cases.
Apples	5,740	tons.
Onions	87,820	cases.
Onions	968	bags.
Grapes	49,465	barrels.
Lemons	32,929	cases.
Melons	4,513	,,
Pomegranates	1,860	,,
Grape Fruit	599	,,
Dates	35	,,
Tomatoes	7,878	,,
Plums	2,898	,,
Figs	14,448	,,
Currants	134,084	,,
Sultanas	68,157	,,
Raisins	145,249	,,
Potatoes	219,784	,,
Carrots	40	bags.
Cabbages	721	,,
Cauliflowers in brine ...	204	barrels.
Marrow	4	bags.
Gherkins in brine ...	2	barrels.
Lemon Peel	950	pipes.
Orange peel	233	,,
Strawberries in pulp ...	1,900	barrels.
Raspberries ,, ...	830	,,
Gooseberries ,, ...	1,935	,,
Prunes	33,505	cases.
Apples, Evaporated ...	3,450	,,
Peaches	1,997	,,
Apricots	740	,,
Fruit Salad	100	,,
Muscatels	1,250	,,

5. Other Foodstuffs.

Butter	55,288	cases.
Lard	90,399	,,
Margarine	2,512	,,
Sauce...	43,153	,,
Ketchup	21,100	,,
Cocoanuts	3,000	bags.
Honey	530	cases.
Cocoa	1,757	,,
Dessicated Cocoanut ...	1,325	,,
Suet	20	,,
Chocolate	48	,,
Cheese...	140,634	,,
Eggs	14	,,
Poultry	13	,,

TABLE II.

Amount of Food found Unsound which was destroyed or otherwise dealt with so as not to be used for human food.

	tons.	*cwts.*	*qrs.*	*lbs.*
1. Fresh or Frozen Beef, etc.				
Frozen beef 4 hind qrs. ...		2	3	21
,, mutton 2 carcases ...			3	16
,, ,, ,, trimmings		2	2	21
,, kidneys, 5 cases ...			2	18
2. Cured or Salted Beef & Pork	—	—	—	—
3. Canned Meat, Fish, Fruits, Milk, etc.				
Canned Tongue 1 tin ...				1
,, apricots 175 ,, ...		3		26
,, pears - 134 ,, ...		3	0	17
,, peaches 165 ,, ...		3	1	17
,, pines - 770 ,, ...		17	0	19
,, raspberries 1 ,, ...				1
,, apples - 1 ,, ...				6
,, plums 28 ,, ...			2	14
,, tomatoes 10 ,, ...				25
,, strawberries 22 ,, ...			1	27
,, fruit salad 69 ,, ...		1	2	4
,, loganberries 1 ,, ...				1
,, salmon 137 ,, ...		1	0	25
4. Fish and Dried Fruit and Vegetables, etc.				
Oranges - 578 cases ...	28	18	0	0
Potatoes - 425 ,, ...	21	5	0	0
Currants - 720 ,, ...	16	12	0	11
Sultanas - 7 ,, ...		3	2	0
Raisins - 214 ,, ...	9	18	1	5
Prunes - 104 ,, ...	1	14	2	20
Onions - 228 ,, ...	11	8	0	0
Apples - 215 barrels ...	14	7	3	22
Melons - 30 cases ...	1	10	0	0
Grapes - 30 barrels ...		1	2	24
Apricots - 4 cases ...			2	22
5. Other Foods.				
Wheat	7	0	0	25
Chocolate	40	0	0	0
Quaker Oats	4	19	2	16
Flour	4	0	0	0

J. A. ROBINSON,
Chief Port Sanitary Inspector.

D. S. DAVIES, M.D.,
Port Medical Officer of Health.